



PERIODICAL *vt*

A Norwegian Apiary in Winter—Florence Tomlinson

JANUARY  
1948

# AMERICAN BEE JOURNAL

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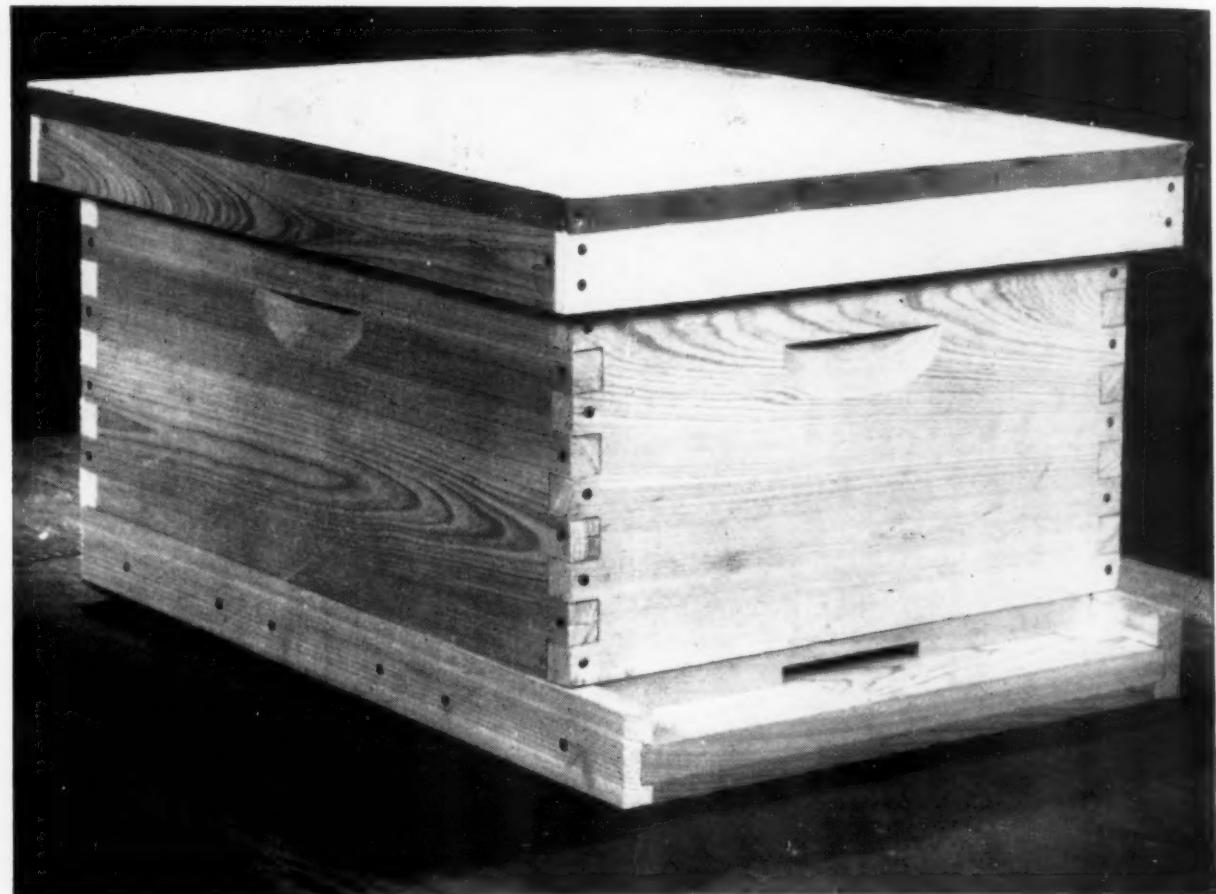
1-9 1948

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# **BABCOCK'S**

## **New Durabilt Equipment**

- ★ CYPRESS, the wood everlasting
- ★ ALUMINUM, the lifetime metal
- ★ WORKMANSHIP unsurpassed

# **BABCOCK HONEY CO.**

803 Sumter Street : Columbia, S. C.

# 1948

## BABCOCK'S

### Production Bred Italian Bees and Queens

**Now booking orders for April and May shipment**

We offer several thousand four frame nuclei, each containing four combs filled with brood, pollen and honey; a young laying Italian queen and two pounds of young worker bees.

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All equipment is furnished in ten frame size unless otherwise specified.

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**BABCOCK HONEY COMPANY**  
803 Sumter Street : Columbia, S. C.

## MANY THANKS

Please send no more package orders for 1948.

Can accept queen orders for shipment after May 20th.

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CAUCASIANS**

**Weaver Apiaries  
Navasota, Texas**

**67 BREEDS**, Pigeons, Bantams, Peafowl, Fowls, Pheasants, Guinea Pigs, Mice, Rabbits, Package Bees. Profitable—Hardy. Low prices. Catalogue "Pleasure-Profit" 10c. Free price list.  
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**Package Bees  
Queens**

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A simple, speedy and accurate device, operating on 110 volts A. C., which embeds and centers four wires in one operation. Proper gauges prevent hot wires from cutting through foundation. Price \$8.25. Postage prepaid. Immediate shipment. Write for information on other models. Territory open for dealers.

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Vol. LXXXVIII, No. 1

## American Bee Journal

HAMILTON, ILLINOIS

Managing Editor—*G. H. Cale*

Associate Editors—*M. G. Dadant, Frank C. Pellett, Roy A. Grout*

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## Italian Package Bees & Queens For 1948

FOR THAT CHOICE SHIPPING DATE ORDER NOW  
EACH PACKAGE WITH YOUNG LAYING QUEEN

	1-24	25-40	50-99	100-up
3-lb.	\$5.50	\$5.35	\$5.20	\$5.00
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(Note price adjustment and change of address)

For queenless package deduct \$1.25

\$1.00 books your order, balance at least 10 days prior to shipping date. Live delivery and satisfaction guaranteed. Health certificate with each order.

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WARREN WILBANKS, Manager

CLAXTON, GEORGIA

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We thank our many customers for their patronage this season.  
We are now booking orders for 1948.

## CALVERT APIARIES

## Three-band Italians

## CALVERT, ALA.

### QUEENS Fall Queens a Specialty QUEENS

You send the order; I have the queens

LEATHER COLORED ITALIAN QUEENS  
MIDDLE TENNESSEE APIARIES

1 to 25, \$1.35; 26 and up, \$1.20—From Imported Straits.  $\frac{1}{4}$  books orders. Balance before shipping. All queens clipped and by air mail at no extra cost. (All queens after June 15, \$1.00)

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Lots of	Queens	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1 to 29	\$1.25	\$4.25	\$5.40	\$6.55	\$7.70
30 or more		4.00	5.00	6.00	7.00

If queenless packages are wanted, deduct \$1.25 each from above prices. If queens introduced add \$1.00 to the price of each package.

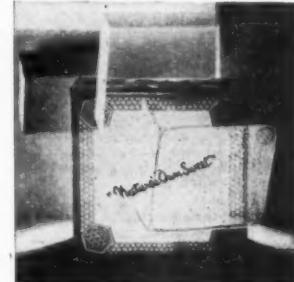
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## DADANT'S - Equipment & Supplies



This year there will be a more plentiful supply of Lewis Beeware in our warehouse stocks. Maybe not enough for everyone. But—a word to the wise is sufficient. So be sure to get our 1948 Supply Catalog early.

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### HIGH GRADE Italian Queens & Package Bees WITH QUEEN

2-lbs. \$4.00      3-lbs. \$5.00  
Guaranteed full weight and prompt shipment.

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3-lb. package with queen	5.25	5.00
4-lb. package with queen	6.25	6.00
5-lb. package with queen	7.25	7.00
Queens	\$1.35	

GASPARD BEE CO. : HESSMER, LA.

## 1948 QUANTITY PRICES

### 50 or More Packages or Queens

2-LB. PACKAGES WITH QUEEN	\$4.50
3-LB. PACKAGES WITH QUEEN	5.70
QUEENS FOR APRIL	1.50
QUEENS AFTER MAY 10TH	1.25

10% deposit will book your order.

Balance must reach us before shipment.

**JOHN S. SHACKELFORD**  
 LIVE OAK, CALIF.

## ITALIAN PACKAGE BEES AND QUEENS

On the Same Old Basis—QUALITY, SERVICE, SATISFACTION

	1-24	25-up	QUEENS
2-lb. bees with queen	\$4.00	\$3.85	
3-lb. bees with queen	5.00	4.90	
4-lb. bees with queen	6.15	6.00	\$1.25

**E. J. BORDELON APIARIES : Box 33, Moreauville, La.**

## The Old Reliable 3-Banded Italian Queens That Get the Job Done

Also pure Caucasian Queens and Caucasian Queens mated to Italian drones. All daughters of carefully selected heavy producing queens mated to drones of equal quality. PRICES:

QUEENS, each	1-24	25-49	50-100
	\$1.40	\$1.30	\$1.20

Ready for shipment April 1st, in large or small quantities. All queens mated and laying. Health Certificate furnished and LIVE DELIVERY GUARANTEED.

**PINE BLUFF BEE FARMS : Rt. 3 : Pine Bluff, Ark.**

## 1948 Package Bees & Queens

PRICES:	Queens	2-lb. with queen	3-lb. with queen
1 to 49	\$1.35	\$4.50	\$5.75
50 to 99	1.25	4.25	5.50
100 up	1.00	4.00	5.00

Above prices will hold unless cost of sugar is materially increased.

**HOMAN BROS. : Rt. 2 : Shannon, Miss.**



Trade Mk. Reg.  
U. S. Pat. Off.

KELLEY—"THE BEE MAN"

# B E E S !

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	LOTS OF 1-9	10-99	100
<b>2-lb. swarms with queens</b>	<b>\$4.50</b>	<b>\$4.25</b>	<b>\$4.00</b>
<b>3-lb. swarms with queens</b>	<b>5.75</b>	<b>5.50</b>	<b>5.25</b>
<b>Young laying queens</b>	<b>1.25</b>		<b>1.00</b>

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## New Improved Master Mix Pollen For 1948

We have 240 colonies with electric heaters. Drones are hard to rear out of season, but we have done it time and again. We had an extra strong colony that we were running for fine drones, feeding it heavy on syrup and keeping the temperature up to 80 they have taken 2 pounds of Master Mix in November 1947. Heat does no good for brood rearing unless you have pollen and feed.

Customers write like this: The Master Mix I bought did very well at my apiaries, 35 miles South of New York. From Michigan, I used it last year and had good results. From Kansas, February 1947, wrote, I used it last year and had splendid results, ship 6 more pails at once. From Illinois, I started feeding Master Mix in 1946 and it is marvelous how they respond, especially the weaker colonies, 1946 was a poor year and I was the only person among several who received a good surplus, I credit that fact to Master Mix Pollen. The bees received from you did well.

1 No. 10 lb. pail, Net weight 8 1/2 lbs. Price **\$2.50—6 for \$13.50**  
1 No 60 Can, Net weight 53 lbs. Price **\$12.00. FREE CIRCULARS.**

We breed three kinds of queens. ITALIANS, CAUCASIANS mated to Italian drones and daughters of queens bred for resistance. Over 30 years a shipper all over U. S. A. and Canada.

2-lb. package bees with queen-----	<b>\$5.00</b>	Extra queens, <b>\$1.50</b> each.
3-lb. package bees with queen-----	<b>6.25</b>	Discount on large lots.
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The ready mixed aluminum paint. Used by the leading beekeepers all over the U.S.A. They have found it to be all we claim for it, acid and fume resistant, no waste, reduces temperature from 10 to 15 degrees. Write for information and prices.

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BOX 83 ORANGEBURGH, N. Y.

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PACKAGE SEASON STARTS APRIL 1ST.

2-lb. package, 4 to 24----- **\$4.50**  
3-lb. package, 4 to 24----- **5.75**

Queen \$1.25, March 25th

WRITE FOR PRICES  
ON LARGER LOTS.

**M. E. BAKER, Rt. 1, Box 202, Gridley, California**

## Holiday Greetings

and best of everything to you and your families.  
May the Yuletide season bless you especially with good health and happiness.

### WICHT APIARIES

406 Miller St., Hattiesburg, Mississippi

Breeder of Better Bees



## A Manual of BEEKEEPING for English Speaking Beekeepers

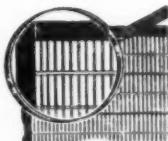
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Chatham - Ontario - Canada

For Better Beekeeping

Use

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FIRST CHOICE of EXPERT BEEKEEPERS

## Italian Package Bees and Queens For 1948

Quantity	1-29	30-98	99 & over
2-lbs. with queen	\$4.30	\$4.15	\$4.00
3-lbs with queen	5.30	5.15	5.00
Extra queens	1.35	1.30	1.25

For queenless packages deduct the price of the queen

Package prices are F. O. B. Tifton, Georgia. Queens only are postpaid

Terms: \$1.00 deposit per package when the order is booked and the remainder is due 10 days prior to shipping. Cancellations are in order at any time prior to shipping and deposits will be promptly returned.

## GIRARDEAU APIARIES TIFFON, GEORGIA

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## Responsible and Reliable Dealers in Honey

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## Announcing Our 1948 Prices

With increased volume, we hope to absorb the increased operating costs experienced this year.

Quantity	Queens	2-lb. Pkg.	3-lb. Pkg.
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25-99	1.30	4.25	5.55
100-Up	1.20	4.00	5.25

No package orders in large lots accepted for shipment before May

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## DOVETAILING MACHINE

Now a size for every beekeeper's shop. A valuable machine for making your own hive bodies and supers and for repairing your old ones.

No reason to ever be short of hives and supers with one of these machines in your own shop. Does a perfect job of dovetailing.

Requires only a small motor to operate. Make those slack winter months pay dividends by making your own equipment. Easy to operate and priced within reach of all beekeepers. Write for details.

## CARL E. JOHNSON CO.

1557 Gregory Ave., Lincoln Park 25, Michigan

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Now booking orders for THE OLD RELIABLE

## Puett's Packages and Queens

No increase in price unless cost of sugar takes a material advance

All orders for more than two packages SHOULD BE FOR MULTIPLES OF THREE, to make even crates.

All orders should be accompanied by payment of \$1.00 PER PACKAGE, to confirm and hold shipping date, balance payable before shipping.

PRICES—Quantity Scale:	1 to 9	12 to 48	51 to 99	102 & Above
2-lb. Package with Queen	ea. \$4.50	ea. \$4.25	ea. \$4.15	ea. \$4.00
3-lb. Package with Queen	ea. 5.65	ea. 5.40	ea. 5.30	ea. 5.15
4-lb. Package with Queen	ea. 6.80	ea. 6.55	ea. 6.45	ea. 6.30
Extra Queen, Untested, \$1.25, any quantity—Tested, \$2.00, any quantity.				
For queenless packages deduct \$1.25. Loose-Queen type (late shipment only) add \$1.00.				

Any deposit refunded if order is cancelled ten days before shipment.

ORDER TODAY—DON'T WAIT.

**THE PUETT COMPANY : Hahira, Georgia**



KELLEY—"THE BEE MAN"

## TIN AND GLASS

1-lb. Honey Jars, ctn 24  
2-lb. Honey Jars, ctn 12  
5-lb. Honey Jars, ctn 6  
24 CARTONS

70c each  
45c each  
\$10.25

Ctn 50, 5-lb. Tin Pails  
Ctn 50, 10-lb. Tin Pails

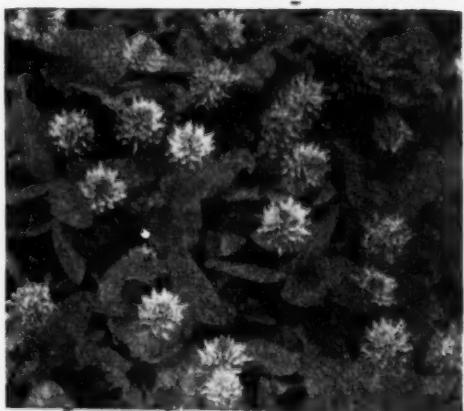
\$3.75  
5.50

5% discount on \$50.00  
& 10% on \$100 orders

Shipment same day order  
is received from our Paducah  
stock. No limit—carloads in  
stock.

**THE WALTER T. KELLEY, CO.**

**PADUCAH, KY.**



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START WITH LIVE PLANTS

Spreads rapidly from deep roots and increases from year to year. Blooms in June and July. Very attractive to bees. Root divisions may be planted now in south; north in spring. Orders for delivery now, or for winter or spring. Root divisions—25, \$2.00; 100, \$5.00; 250, \$10.00; 500, 18.00, postpaid.

**Melvin Pellett**  
ATLANTIC, IOWA

NORTHERN CALIFORNIA  
TOP QUALITY

### ITALIAN PACKAGE BEES AND QUEENS

2-lb. pkg. with queen ..... \$4.75  
3-lb. pkg. with queen ..... 6.00  
add 25c per package for orders less  
than 25. Young queens \$1.35—  
\$1.50 for orders less than 25.

Book early for choice dates.

**SAM E. MOORE**

2436 North St. Redding, California

### ITALIAN BEES AND QUEENS

	Queens	2-lb.	3-lb.	4-lb.
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100 up	5.25

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5-15	1.50	4.65	5.90	7.15	8.40
15-25	1.40	4.50	5.75	7.00	8.25
25-up	1.35	4.40	5.65	6.90	8.15

Above package prices include queen. Queenless packages, subtract \$1.35 from price of package with queen. All queens are airmail, postpaid, but package bees are F.O.B. shipping point and are shipped Express collect. It is preferable to ship package bees by Railway Express, however, they can be mailed and in that event, customer should include postage.

TERMS: Small orders, cash in full. Large orders, 20 per cent deposit, balance to be received two weeks before shipping date. U. S. funds. A 10 per cent discount is allowed on package bees if shipment is to be made after May 20th. A 20 per cent discount is allowed on queens if shipment is to be made after May 20th, and a 30 per cent discount is allowed on queens to be shipped after June 1st.

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Quantity	1 to 2	3 to 27	30 to 99	102 and up
2-lb. packages	\$4.65 each	\$4.50 each	\$4.25 each	\$4.00 each
3-lb. packages	5.85 each	5.65 each	5.40 each	5.15 each
4-lb. packages	7.05 each	6.80 each	6.55 each	
5-lb. packages	8.25 each	7.95 each		
Extra queens	1.50 each	1.45 each	1.40 each	1.35 each

Bees are supplied in neat new cages. Certified bees from our own apiaries, state registered and state inspected. Package bees by express only, queens not with packages by mail. We recommend 3-lb. packages, as best all-around size. If convenient, small orders cash, larger orders \$1.00 deposit per package, to insure order, and the balance not less than two weeks prior to shipping date. Shipping will begin as early in spring as weather conditions will permit, usually about first of April. Help us to help you, by booking your orders now without delay as demand is expected to be heavy. Thanking all of you for past favors and wishing more honey to you for a great 1948.

**YORK BEE COMPANY : Jesup, Georgia, U. S. A.**  
(THE UNIVERSAL APIARIES)

## PACKAGE BEES : QUEENS : 1948

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	1-9	10-40	50 Up	
Queens	\$1.40	\$1.35	\$1.30	For queenless package
2-lb. Bees	4.50	4.35		deduct price of queen.
3-lb. Bees	5.75	5.60		

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25-49	1.30	4.25	5.50	6.65
50-99	1.25	4.15	5.30	6.45
100-up	1.20	4.00	5.15	6.30

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FOR APRIL AND MAY DELIVERY

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Queens (each)	1.30

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# As We

## Volume 88—Then and Now

WITH this month's issue the American Bee Journal begins volume 88. The coming of the new year is a reminder of the rapidity with which changes are occurring and a reason for a review of the events of the past. 1948 comes in at a time when half of the world is in distress with hunger and privation, the lot of millions of unfortunates. Here in America we are enjoying a period of rare prosperity when the average worker has luxuries which were undreamed of by kings when this magazine was born.

That we are not unmindful of the distress abroad is evidenced by the friendship trains which recently collected hundreds of carloads of food to be sent to those in need in less fortunate countries. There has been wide comment on the fact that one beekeeper gave a ton of honey.

In the early years this magazine had little advertising support. Among the leading advertisements was that of J. M. Thorburn, of "Seeds for Bee Pasture." By 1868 a few venturesome beemen were advertising that queen bees could be sent for short distances by mail. The price ranged all the way from \$3 to \$20 each.

This, the first publication devoted to beekeeping in the English language, has come a long way since then. Very rarely was a picture used to illustrate an article. Now pictures tell an important part of the story with every feature article. When the first magazine appeared the movable frame hive was a new invention and few of them were in use. There were no smokers, no extractors, and several years were to pass before foundation became available.

The business of honey production as now practiced has developed within the lifetime of this magazine and the story of progress has been told in its pages. It is our hope to be able to record in volume 88 important new improvements which will make work easier, production larger and insure a larger measure of prosperity for our readers, as it has been our privilege to do in the past.

We express our appreciation for the loyal support of readers throughout the world and to each and every one we wish a very HAPPY NEW YEAR.

## Demand for Comb Honey

RECENTLY a letter came to this office from a man who is known the world around, asking where he can buy comb honey. Unfortunately he did not know of anyone who might supply him at this time. The letter indicated that the writer had no interest in extracted honey. To him there is no substitute for honey in the comb. Sirups of several kinds can be found in any food store but none of them are in the class with comb honey as sealed in its original container by the bees.

Here is an example of a man who lives in an important honey-producing area in the state of New York who is unable to find any comb honey for sale. There can be no question but that the disappearance of comb honey from the market is the source of great loss to the industry. There are many who like our correspondent will take no substitute. To them extracted honey is just another sirup.

Perhaps it may prove to the advantage of the cooperatives to encourage their members to produce a certain percentage of the crop in the form of section honey or cut comb honey in order to retain this special market which is quite willing to pay a premium.

## The National Meeting

HERE are signs on every hand that the days of extremely high prices are soon to be over. Buyer resistance is slowing the sales of numerous commodities and the time for readjustment in prices is not very far away. Acute shortages in some lines may make for delay but not for long.

When the leveling off process is in the making,

# See It



some lines will be hurt much more seriously than others. In highly competitive fields it is the industry with the aggressive sales policy that comes through in the best position.

It is this situation which points to the coming meeting of our national organizations at Salt Lake City, January 14-16 as unusually important. The National Federation and the American Honey Institute will have a large influence on the future of the honey producing industry. We are facing a period of extreme pressure on prices and the activities of these organizations will largely determine the measure of our prosperity for many years to come.

In order to meet the situation the industry needs a well-planned program and it seems highly important that the new officers think things through very clearly before leaving the convention. Never has the general public shown so much interest in the beekeeper as now, since the value of the services of the honeybee in pollination are coming to be better understood. We should make the most of this advantage and we need the services of the most capable men in the industry in laying plans for organized activity.

## *Honey for Babies*

**A** well-known physician advises that the reason he does not recommend honey for babies is because of the lack of uniformity in the product available to the housewife who buys from her grocer. Babies are often upset by a change of diet and doctors like to be sure that there will be little variation from day to day in the food to which they have become accustomed.

There appears to be a very real need of a brand of certified honey for babies which can be depended upon as uniform in quality. Such a product is likely to find a ready market and it would seem that all our larger packers would establish their own brand. The difficulty of always making sure of uniform quality is probably the

reason why packers have hesitated to enter this field. Perhaps it should be done by a firm who will make it a specialty and not attempt to enter any other market.

## *Offgrade Honey*

**T**HERE appears to have been harvested an unprecedented crop of fall honey the past season. Much of this honey has a decided flavor which is objectionable to the average housewife for table honey. It is very fortunate that in recent years there has been a substantial increase in the use of honey in baking and in other manufacturing processes. All this honey should move into such channels within a reasonable time.

There is danger that too many beekeepers in their eagerness to get cash for the crop may sell it for table honey and thus spoil the demand for the better grade product. It is very easy to depress the market for any product by the substitution of an inferior article. It is highly important that all table honey be carefully graded and that no housewife be disappointed by the purchase of a product which is not pleasing to the palates of her family.

## *Honey Publicity*

**“P**HOENIX FLAME,” a 24-page illustrated house organ of the Phoenix Bottle Cap Company, contains an article in the October number written by Harriett M. Grace, Director of the American Honey Institute on “Honey the Oldest Sweet.” A full page illustration is given opposite the article of the new booklet “New Favorite Honey Recipes” which is now available through the American Honey Institute offices.

Such publicity as this does an immeasurable amount of good and should be multiplied many fold by proper cooperative effort on the part of beekeepers themselves. Our compliments to the American Honey Institute and Mrs. Grace.



# THE AMERICAN BEE JOURNAL



January

1948



## The Opinions Herein Contained . . . .



By  
Milton H. Stricker

*A smart, keeper-of-bees strictly for pollination purposes takes exception to the use of sulfa and calls it a pseudo-cure. Although he may get the reputation for being a "stick-in-the mud," he chooses to continue his burning practice!*

THE opinions herein contained are the opinions of the author and not necessarily those of the editors, or writers, or even readers of this bee journal. I will go further than that and explain that this was not written to get in any "back-handed licks" at any author of any sulfa treatment or plan that takes bee disease control out of the hands of exacting, conscientious and well-schooled beekeepers and allows bee-

keepers to cure their trouble with one or more penny pills.

To explain why it was written, I can only say that I had hoped that of the many who read this magazine **some** will read this article and of these a few will read of my experiences and think a second time before being swayed by the present propaganda that exclaims against all our tried methods of disease extermination and thrusts the sulfa treatment upon us calling it a cure. Remember these words: That though the sulfa treatment has promise, it is still only a treatment and not a cure.

If **one** of these few, who now has a clean apiary, will stop to think before

endangering his whole outfit by a treatment, that our most trusted research specialists have cautioned us against, and will continue using his present control and eradication methods until our scientists prove the worth of sulfa—I will be more than satisfied.

Since my last mention of sulfa (American Bee Journal, Oct. 1946) most of my critics, and there were many, seemed to object to the fact that I just saw the results in the bees of other beekeepers and hadn't tried it myself. In early spring of this year my early inspection didn't show any American foulbrood in my whole outfit (one of the troubles you will have

if you keep on burning—but a nice trouble). A friend came to my rescue and donated three fine specimens of American foulbrood. What a friend to give one American foulbrood! All three were strong, two-story colonies. Two were in the early stages with about ten to fifteen cells of American foulbrood showing in each. The other was just as strong in bees but showed about 100 cells of diseased brood.

I treated these as recommended with one tablet of sulfathiazole in each feeder can of sugar sirup. After two applications the two colonies least affected showed no diseased brood. After a third application the other colony was **apparently** free of infection.

On the surface of this treatment this looks like nothing short of a miracle and in one month's time these colonies were building up and producing honey instead of being a burned residue under the soil that covers a burning hole.

Fortunately these colonies each harvested a full super of honey, very good for the early summer flow in that particular area. These colonies were now in four stories. Two stories were of brood, one body of surplus honey almost sealed and a fourth body containing combs and some honey, in the process of being ripened.

Since these colonies were in an isolated area, I allowed them to remain without attention during the month of June. Early in July, I examined the colonies and found that more unexpected honey had been brought in filling the second story and confining the queen to the lower story, and a thorough inspection failed to show any diseased brood.

This was the opportunity I awaited. I lost no time in moving three more colonies into this quarantined yard. I selected three colonies that had returned from blueberry pollination with normal brood areas for that locality. I doubt if they were headed by superior queens bred from resistant stock because the bee population is so thick in this state that the mating and continuance of American foulbrood resistant stock is difficult. However, the stock was productive, and the colonies were normal and positively not infected with American foulbrood disease.

I then lifted each of the three from their bottom boards, and inverted a second story from a "sulfa-cleaned" colony upon the bottom board of each

clean colony. This inverting allowed the top bars of the honey laden frames to drop downward upon the bottom but this was desired. The brood nest was placed over this in a normal position, then a body of clean, empty combs was placed above the brood nest.

This arrangement resulted in the moving upstairs of the honey from the upside-down combs. It seems that turning frames in this manner gets the bees to moving honey upstairs—but rapidly (Hedden and Danzenbaker had something when they observed this). The honey was moved through the brood nest and up into that third story. I suppose some of this honey was fed to the brood in passing because of the colonies, hitherto free of American foulbrood, are now contaminated with American foulbrood, (August 6).

Now this is strange if we have been under the impression that a colony treated with sulfa cleans up all traces of American foulbrood. But look back, none of its advocates claim that sulfa kills *Bacillus larvae*, and this very factor makes the feeding of sulfa dangerous. Even if my third colony doesn't ever break down with American foulbrood, my little experiment proves that if you use the equipment from sulfa-treated colonies you have two chances out of three that you will contaminate the colonies that this equipment is used on.

Also, if you extracted the honey instead of feeding it back to the colonies as I did, it would look as if you would spread the germs, since the honey is still carrying the bacteria in the spore form—within your extractor, on to other combs and out into your bee yards where you'd be bound to spread some more disease.

Now I know that I can just feed more sulfa-charged sirup to the two infected colonies, and even to the third if it does show American foulbrood, but are my worries at an end? No, I've got to be on the alert at all times and ready to feed sirup, and I do not dare mingle this equipment with the rest of my outfit or even run the honey through my extractor without a sterilization of the extractor.

Oh, yes, these colonies will produce honey! My six colonies have produced about 480 pounds of honey, but remember clean colonies would have produced just as much with a lot less time, energy and material.

I admit the material for treatment is cheap but why build up a Frankenstein's monster that means feeding more and more until you are feeding every colony in your apiary, then eventually your neighbor's, to keep infection at a minimum. And who knows—perhaps the bees could build up an immunity to the sulfa treatment. Many humans have already done so and require different treatments for the same diseases that sulfa used to cure.

No, I think I'll stay away from sulfa and continue the burning treatment, though it is so old-fashioned and I get the reputation for being a stick-in-the-mud. After all, at present I am burning less than one per cent of my total colonies in a bad year, and many years none at all. Altogether, valuing the colonies at a high of twenty-five dollars per colony and burning all the equipment, I find that in the last ten years I've only spent about fifty dollars a year on disease control—a lot less than the sulfa, sugar, time, and labor expended if I embraced the sulfa situation. And to my fellow beekeepers, don't despair; your bill can be just as little if you keep watching for American foulbrood, burn when you see the first cell and never use unsterilized or questionable equipment.

To get back to the six colonies, the honey from the three originals and the two showing infection has been extracted and the colonies burned. I am enclosing a picture of them succumbing to the burning hole, and my helper scorching the equipment with a high pressure kerosene torch. I don't approve of saving the equipment in normal times but the equipment shortage has led me to this sterilization. But I wouldn't even save the frames if I had to make new ones by hand.

I intend to burn the third colony the minute it shows infection, and, if it doesn't, I'll still keep it under quarantine because I don't trust sulfa or its pseudo-cure which is a dangerous treatment if you do not keep a strict quarantine upon all equipment connected with your sulfa experiments.

The 480 pounds of honey? Oh, you're interested? Well, I will sell but I think it would be only fair to ship it to some state that approves of sulfa since I am sure it is literally crawling with the spores of *Bacillus larvae*.

# Why Burn....?

By

Howard J. Rock

*Friendly counsel and personal observations for many years by the author result in these timely remarks concerning the question: Whether to burn—or not to burn? Interestingly, our author pretty well favors a wise course of action.*

IT has been my privilege to observe American foulbrood in most parts of the U. S. and Canada both as an inspector and as a honey producer.

My opinions concerning American foulbrood have always been tempered by an old beeman in Colorado who once made the remark that the disease wasn't as big a menace as the inspectors made it. Of course, he didn't have a large investment to worry about, and it was a fact that his 80-colony apiary possessed a high degree of resistance as he firmly believed in the survival of the fittest. Although I didn't think of it at the time, he was the first beeman with a sane approach to the subject.

There is no doubt that the development of resistant stock is the correct long-range program to adopt and, in the meantime, use sulfa judiciously to keep losses at a minimum.

It seems to me that there are as many strains of *Bacillus* larvae as there are of bees judging by the virulence of the disease in different regions. Or does the difference lie in regional characteristics?

While in Montana, I never saw diseased brood reach the pupal stage and my observations were quite extensive. I often wonder about that. Was the bacterium extremely virulent or were the larvae made more susceptible by lack of water or low atmospheric humidity?

I have had considerable experience in northern Minnesota, partly as an inspector for the late Dr. M. C.

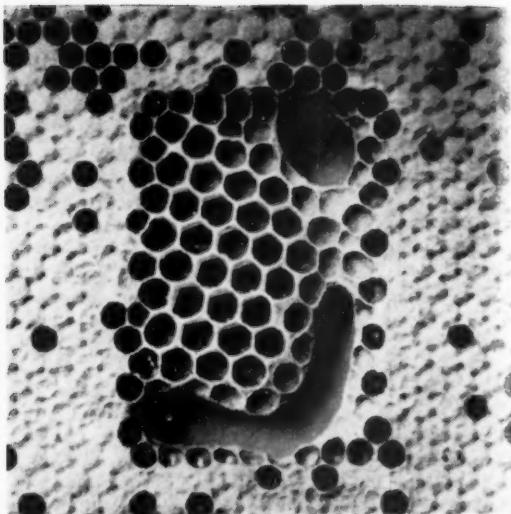
Tanquary. In all diseased colonies observed, diseased pupae were always present many with the characteristic "stuck-up" tongue.

It has often been claimed that American foulbrood is easily overlooked during a honeyflow because the bees cover up the scales and diseased larvae temporarily with partially ripened honey and nectar. Although I have looked for this very thing for several years, I have never actually seen a diseased cell which contained honey or nectar, or for that matter anything else. I believe it is against the bees' nature to store honey, pollen or nectar in a dirty or contaminated cell.

I wonder if any readers have ever actually seen any such thing. It would be interesting to know.

Concerning sulfa medication, I believe it has a definite place in any control program. I know of one package bee yard of about 125 colonies which was really hit hard by American foulbrood about four weeks after installation. The bees were of an average commercial stock, that is, not bred for resistance. By the timely use of sodium sulfathiazole, what seemed to be a total loss resulted in a half crop. With today's prices a half crop means breaking even, which is better than a total loss. This particular apiarist got his money back and was still in business the next season, thanks to the judicious use of sulfa.

When susceptible stock breaks down with American foulbrood and is made



Healthy sealed brood around an AFB insert. The resistant bees have removed the diseased comb and built new comb in its place.

to pay its way via sulfa medication, I believe the stock should be gassed in the fall, all honey and wax salvaged, and the equipment should be sterilized.

Where resistant stock breaks down, and it does sometimes via supersEDURE, I would merely clean up with sulfa and requeen the same colonies with young resistant-stock queens.

If everyone used resistant stock and cooperated in stock selection, American foulbrood would become minor in importance. With the use of susceptible commercial strains, American foulbrood is paramount. Before the use of sulfa the apiarist considered all his colonies clean and healthy until proved otherwise. Nowadays we have a complete change about, as those apiarists who have unusual faith in the sulfa consider each and every one of their colonies to be in jeopardy. So spring work is made more cumbersome with trucks filled with feeders and medicated sirup. This spring sulfa feeding is a fetish with some, or so it seems.

It is very possible, although who can say how probable, that a sulfa-fast strain of *Bacillus* larvae may yet develop and then we will have to use the sulfa synergistically with allantoin or some other kind of proteolytic chemical.

Beekeeping is becoming too complicated and cumbersome. Why can't we be more like that old Colorado beeman? Some day we might consider him downright scientific.

Wisconsin.

# A Bee Line Down a Highway

By T. J. Wells

**Y**OU people pull up a chair and gather around and let's talk about the highways and byways of this good old U. S. A. As you know at different times there have been large sums of money spent to beautify parts of highways over the country. I wonder why they couldn't set fruit trees and other nectar bearing trees.

Maybe if the beekeepers were better organized we could get others to thinking and talking about it and get more of such things done.

Recently a nine mile paved highway was beautified with pine, and other trees that have no value whatsoever. Now fellows, they are not even pretty to me. But have you ever driven down a road lined with red buds in early spring, billions of blossoms and the fragrance, well if you have never seen it, I don't know any words to describe it to you. Billions of blossoms dripping with honey, and the bees can't gather it fast enough. Then you wonder why someone hasn't developed a hive with a landing board on all four sides.

Now I have talked with some of the boys who went through France in World War II and they told me that the shoulders of the highways were set to apple trees and others to grape vines. I asked them, who gathered the fruit. They told me, "anybody who wanted it, we gathered all we wanted." Maybe there was so much fruit, there was no trouble about who would get it. Now I think whoever instigated that apple tree planting some 20 or 30 years ago was doing his country a mighty fine service.

It might be the reason we don't have such things here is we think this country is so rich we don't have to, but I have seen children go without fruit a whole winter, while in California they burned small oranges by the carload to keep the price up.

Just think how not only the people would be benefited but the beekeeper. How much honey per mile could be produced from highways set to nectar-bearing trees and sweet clover sown underneath. The trees would be a lifesaver for bees in some sections, because they would build up the colonies early in the spring.

Just because this is a rich country is no reason why we should waste the use of such land. Let's utilize every bit of land we can, in so doing we will also beautify. If we had twice the number of bees in the United States, we could double the production of half of our crops, and increase the rest by proper use of crop rotation and legumes. Breaking that down means legumes on our land, and with legumes on our land we have to have a pollination job done. Agriculture needs more BEES, BEES, BEES.

Oklahoma.



# That New Clover Again

A legume unlike any previously known to agriculture.

By Frank C. Pellett



Melvin Pellett with root divisions like those planted in test plots.

NOT since the discovery of the annual sweet clover, later named Hubam, has so much interest been manifested in a new legume as is now shown for the wild clover from Russia. *Trifolium ambiguum* has been named Pellett Clover by the Iowa Bee-

keepers Association at the suggestion of the president of that organization, as a compliment to the American Bee Journal test garden where it was called to public attention.

The story of the new clover has been told in part in this magazine in November 1945 and again in November 1946. In the meantime the interest has continued to grow and it has been planted for trial in many new locations. There is still much to be learned about its peculiar habits and adaptations before it can be generally recommended for planting.

It is of special interest to those interested in erosion control. There has long been felt the need of a perennial legume with extensive root system which will prevent washing of the soil. The clovers in common cultivation are short lived and lack hardiness. The new clover appears to be hardy even in the far North and has a root system unlike any other crop in common use.

Our plots were started from about a dozen or two seeds received from a correspondent, C. V. Porter, who

like us, is interested in new legumes. Four or five plants came from this small planting in 1941 and from them many thousands of plants have since come.

The plants root very deeply and branch freely, thus spreading rapidly by underground rhizomes. Small root divisions with buds grow readily and establish themselves within a few weeks. From one such root division planted in early spring may come as many as twenty to thirty plants by the following October.

Since the supply of seed has been so meager we have made increase by planting the root divisions. By planting them in rows about three or four feet apart and spacing the plants at one to two feet apart in the row we have obtained a solid mat of plants in about fifteen months. Where planted in this way in April 1946 the rows had grown together by June of the following year.

Plants dug the year after planting have developed a root system which visitors from the soil conservation service say they have never seen

Left, Roots uncovered to show how they spread underground. Below, Pellett clover in bloom.



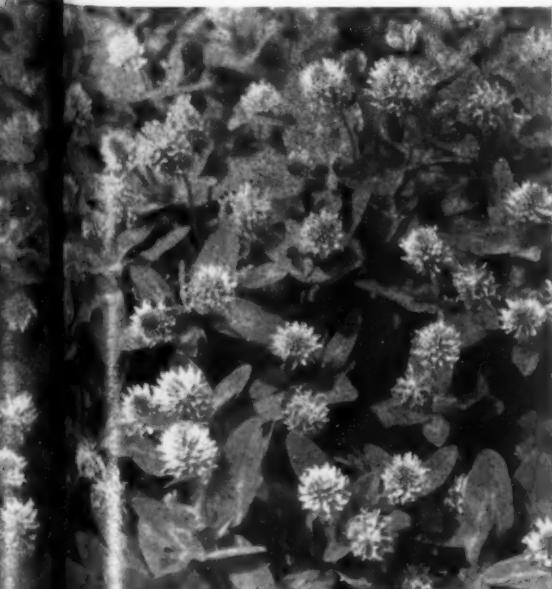
equalled by any other legume. One dug at the time of the first pollination conference at Atlantic, in 1945, had a cluster of roots that just about filled a bushel basket.

Since our former articles were published, a letter received from the Ministry of Agriculture in Moscow, Russia, gives some interesting information about the plant in its native country. In its wild state it grows in the Caucasus on the steppe lowlands, on the meadows along the outskirts of the forests and in the forests and on the mountain meadows even to the alpine zone. There it is said to be valuable for a fodder crop as well as for permanent pasture. Also for hay in the southern provinces of the forest zone.

This indicates that there need be no fear of winter killing from this clover which is the cause of such heavy losses of red clover and alfalfa in many parts of our country. The habit of root growth is such that heaving offers little prospect of injury since a branch of the root once broken off will grow quite readily.

Those who have seen the amazing growth in our test garden have wondered why it does so poorly in some other situations. Whether it is for lack of suitable inoculation or lack of adaptation to a particular soil is not yet apparent. A correspondent in Alberta who secured a small lot of root divisions planted them on two different soils a few miles apart. He reports that in one location the plant made a surprising growth and very rapid increase. In the other the plants lived but made little progress and at the end of the season appeared

Top, Melvin with a plant thirteen months after planting from a root division. Below, Cliff Hardie, Extension Director, and Melvin with plants dug May 15, 1947 grown from divisions planted in April 1946. Lower left. The bloom is a beautiful sight.



to be about as they had been at planting time.

For the first two years we were unable to find any evidence of nodules on the roots in our test garden although the plant grew rapidly. Now, however, nodules are present on the small rootlets deep underground. A bacteriologist investigating the bacteria reports that they are growing on the roots of the plant in the laboratory greenhouse and that the plants are getting air nitrogen. Perhaps the lack of inoculation may explain the poor behavior in some places but it would hardly clear up the mystery of the difference in behavior of the two plantings in Alberta.

After standing for two years the sod of this new clover is so heavy as to be difficult to turn under with a plow. It takes good machinery to do an efficient job since the root growth is so unusually heavy. No other plant that we know will return so great an amount of humus to the soil.

Judging from the experience in our test garden this new clover should be ideal for waterways, roadside planting and for places where a long-lived plant is needed. If it proves adaptable to variety of soils it is likely to be widely used in soil conservation programs.

#### The Clover for Bees

In early spring only basil leaves which are very large are present. At times the stems of these basil leaves are as much as a foot in length and the leaflets even larger than those of red clover. In early June the flowering stems appear and rise to a height of two to three feet with several large white blossoms, tinged with pink. Apparently the plant will produce only one full crop of hay in a season and if this is cut before

seed is set a good second flowering is unlikely.

The corolla is unlike red clover since the tube is very shallow and joined only at the very bottom. The nectar thus is easily accessible to the bees. Under favorable conditions the bees visit the flowers in large numbers and the plant sets seed abundantly. Our observation indicates this to be one of the best of the legumes for bee pasture. Before the flowers open a field of this clover looks very much like red clover. In full flower it appears more like alsike as the blossoms are about the same color although larger in size. It blooms from early June to mid-July.

Animals are very fond of the fresh plants and there is general complaint of difficulty in getting it started where rabbits are plentiful since they eat it so greedily. Cows likewise graze it with evident relish at every opportunity. This would seem to be the answer as to its palatability.

It differs from other clovers in several ways. Instead of the tap root of red or alsike clover it has a widely branching system spreading in every direction. Instead of the surface runners of the common white clover it has deep underground rhizomes which appear to be very drought resistant. Instead of growing only from seed it will propagate as readily from root divisions, a very unusual character in a leguminous plant.

It resembles the common white clover with its strong basil leaves but it also has a flowering stem similar to that of red clover. Thus in spring it appears more like the white clover and later more like the red clover. It also appears to be long lived which is unlike any other clover in our test garden. After seven seasons the plants are still vigorous in the small plot where first it was planted.

No other legume that we have found shows any resemblance to the expansive root system which provides such a mass of material for resisting erosion or for the return of humus to the soil. As a soil builder it is unusually promising.

Its flowering is very similar in time to that of both red clover and alsike coming in June and July but it differs in that it offers but scant bloom in late summer.

But few plants are known to have a richer nectar than that of the new clover. Of the many samples examined by Dr. O. W. Park, of Iowa State College, at different times, the sugar content ranged from a low of 42% to a high of 58%. The average is about 50% which indicates a rich harvest for the bees when conditions are favorable.

The appearance of the leaves is so much like those of red clover that one would easily be deceived into thinking they belonged to that plant. In cold resistance it seems to be in a class by itself and it roots so deeply as to be much less affected by dry weather than other clovers.

It is unfortunate that we are unable to tell under what conditions it is likely to succeed but this can be determined only by trial. It has so many attractions that it is highly desirable to have it tested under a great variety of environmental conditions. In localities where it finds a place in the soil conservation program or in the farm rotation it should do much to improve the bee pasture of the community. When we remember how greatly the beekeepers have profited by the introduction of alsike clover and sweet clover we grow enthusiastic about the future of the new plant which Iowa bee-men call Pellett Clover.

## Wisconsin State Winter Meeting a Success

The Wisconsin State Beekeepers' Association turned out in goodly numbers to attend their annual winter meeting at Fond du Lac, October 29 and 30. An enthusiastic crowd attended the meetings of the association and the ladies auxiliary. The meeting was called to order by Mr. Walter Diehneit, Menomonee Falls, president of the association. Speakers on the program included Miss Virginia McNaughton of the American Honey Institute; James Gwin, chief inspector; S. E. McGregor, Dr. C. L. Farrar, and Dr. Wm. Roberts, all of the North Central

States Bee Culture Laboratory; Mr. Gordon Crum, Publicity Department, Wisconsin Department of Agriculture; Professor I. F. Hall, University of Wisconsin; H. J. Rahmlow; John F. Long, deputy inspector; and Roy A. Grout of the American Bee Journal staff.

The two-day program was climaxed by the banquet to honor James Gwin for 25 years of service to the beekeepers of Wisconsin. In recognition of his service, Mr. Gwin was presented a pen and pencil desk set suitably inscribed, and Mr. Gwin responded with a talk entitled "My Twenty-five Years Working For and With You."

Mr. H. J. Rahmlow gave a travelogue with colored slides of a trip to the world's largest fruit growing section, British Columbia.

# That Beeman In Vermont

One Czech becomes a Yankee—  
And likes it

By  
Frank R. Arnold

**T**HERE are two reasons why a beekeeper should visit Middlebury, Vermont: First, you meet Vermont in its finest flowering and second, you meet Charles Mraz, the Vermont beekeeper par excellence. Vermont people are well worth knowing as you may find by talking to any one of them, furiously individual and furiously practical.

Each Vermont writer has his favorite story—from Dorothy Canfield Fisher, of Arlington, where the Connecticut strain is prevalent, to Sinclair Lewis who represents the summer element over at Barnard near Dartmouth, over the New Hampshire side of the mountains. Mr. Lewis' best story, which came out in the Saturday Evening Post some years ago, is that of the tragedy of a Vermonter who, though raised on a Vermont farm, has to be a Brooklyn dentist to please his father and his wife and is kept all his life from the

ancestral acres. Dorothy Canfield's is more practical. It was picked up one June as she talked to high school graduates. A Vermont academy wanted a gymnasium and a Vermont man who was running a dairy over in New Jersey gave them the \$20,000, which they thought it would cost. It cost only \$18,500 and the school promptly returned \$1500 to the donor. The two stories show the flavor of Vermont men, their love of the soil and a Puritan scrupulousness in business dealings, both of which are the basis of an all-round successful beeman.

Anyone would know that Vermont must be a good pasturage state by its marble outcroppings, especially on the New York side of the Green Mountains, which are everywhere utilized, as in the marble slabs of the sidewalks of Manchester, the lintels of the houses everywhere, and the bank buildings of Bennington. These outcroppings in fields everywhere found their climax in the proctor Museum, where they show the way in which Vermont marble has been used all over the United States. It is this limestone basis of western Vermont that makes such a good pasturage for bees, as thanks to it, alike clover and white Dutch clover make ideal pasturage. The crushed marble supplies a lime element in the otherwise sour Vermont soil and links Addison County, once famous for its Morgan horses and Cheviot sheep, with the New York bees.

You naturally begin talking bees with Mr. Mraz, though you are tempted to ask him first about his Czech ancestry. That should carry him back to the Roman bee ancestry in Czechoslovakia, but a man who in the past year has harvested forty tons of honey in six weeks, must naturally spend the rest of the year in getting it ready for marketing. Mr. Mraz' best stories have to do with his theory

that a good beeman must be a past master at all trades, such as tinsmith, carpenter, plumber, electrician, biologist, chemist, farmer, orchardist, bookkeeper salesman.

The honeyflow may last only six weeks but the rest of the year, apart from the winter vacation in Florida, is devoted to all these occupations, which are simply preparing honey for market. He leads you from a football game to his town laboratory where he shows you with pride his latest new uncapping machine and then goes on with equal pride to the various steps which leaves the honey ready for market in one-pound bottles.

Most states have a bee department at its state college or university. Vermont has none, but it has Mr. Mraz and men who work sympathetically and intelligently with him and who have the Yankee gift of "faculty" and a love of bees Vermont needs. Each agricultural college should have a bee department. Connecticut and Massachusetts each have one. The best is possibly at Cornell. Take such a simple thing as bees and maple sap. You would think that bees, which always come out on warm, sunny winter days, would begin their summer stores with the maple sap honey; that possibly a hive of bees or several hives would be a natural appendage to every maple grove; that there should be maple honey, just as there is cranberry, clethra or orange honey. But Mr. Mraz talks like an experienced chemist and tells you that honey in Vermont owes nothing to maple sap and your vision of beemen renting bees at so much a colony as they do to cranberry and orange men immediately vanishes.

We would say that Mr. Mraz' success with bees is not due to remote Roman or Hebrew beemen, but to the same New England "faculty" element that makes every Vermonter a possible captain of industry.



# A Potential Market in Ireland For Package Bees and Queens

By Rev. Dr. Lucey

Vice-President, Federation of Irish Beekeeping Associations.

BEEKEEPING in Ireland is on the march now—new beekeepers' associations, a new national bee journal, new enthusiasts, and new ideas. Among these ideas are two suggested to us by American methods and practicable only with American cooperation. These are divisions of overwintered colonies and using package bees; for both we need queens and bees from American shippers.

We have little extremes of temperature, much fog, and no great amount of sunshine. For instance though we are in the same latitude as Labrador, we had no serious frost or snowfall since 1917 until last winter; the average winter temperature over the intervening years works out at nearly 44° Fahrenheit.

## Queens?

With winter and spring so mild, there is little if any cessation of brood rearing, stocks build up rapidly and early, and by mid-May the swarming season has begun. This militates against successful beekeeping in two ways: first the weather often turns cold and wet in late May with the result that the young queens fail to mate and the swarm fails to build up for the main honeyflow in late June or even to survive at all; second, it means the weakening of stocks just when they should be strongest, namely at the approach of the main flow. To counter this we have the idea of dividing each stock at the beginning of May, introducing a laying queen to the half separated from the parent stock (many stocks are likely to be strong enough to yield more than one nucleus and therefore to call for more than one extra queen) and so insuring vigorous colonies for the clover flow. To do this we must have queens. And these we must import, for we cannot produce young mated queens so early ourselves because of weather conditions.

Let me quote from an article in the February number of our new

"Irish Beekeeper" by one of our leading beekeepers, who was induced to try the experiment of dividing his overwintered colonies through reading an article by Ed. Braun, Manitoba, on the subject. "I am thankful," he writes, "to Mr. Braun, for putting me on to a good thing; for the price of a May queen I can get two crops of honey from each colony overwintered, and (I hope) no swarms in normal weather. I believe it is well worth the money and the trouble, and I heartily recommend the practice to Irish beekeepers. There is one obvious difficulty . . . and that is the procuring of a good laying queen so early in the season, i. e., about the first week in May."

Could we not get queens by air mail from breeders in your southern states? In point of fact, I have been getting them myself already.

## Packages?

Now for our second idea. Our winter and spring are not only mild but also abnormally foggy and humid. The result is that bees, being semi-active all the time, consume stores very rapidly; worse still, **Acaris woodi**, the mite causing Acarine disease thrives in a damp atmosphere and cannot be neutralized with the Frow mixture at this period. As a consequence our winter losses are always very severe. Many of us think that, in the circumstances, it would pay better to winter fewer stocks and install packages in late April. The snag, of course, is that we cannot produce early package bees ourselves and we have nowhere to get them from.

Before the war, packages and queens were imported from the Mediterranean countries, and no doubt they will soon be available again. Actually, however, these could not be procured before well into May, at earliest, so we cannot hope for much from them. Our hope is in packages from the southern U. S. A.

What stands in the way? Time and distance present no difficulties now that there are regular, well-nigh hourly, air services between the U. S. A. and Ireland. The hop from New York direct to Rineanna, the international airport here in Ireland, takes less than twelve hours; via Gander, Newfoundland, just seventeen hours.

The main obstacle at the moment is cost, the cost of airmail postage. From inquiries I have made here, I find that the charge from New York to Ireland on two-pound package would be about seven dollars; and to this would have to be added the charge from the place of shipment to New York. Obviously while airmail rates remain at this level, importing packages from America would not be a business proposition for us. If, however, a two-pound package could be delivered here for about **six dollars postpaid**, then some thousands of packages would in all probability be ordered each year. Perhaps if some of your shippers' associations took the matter up with the postal authorities, the postal rates might be reduced sufficiently to enable us to do business with each other.

But even though business in package bees is ruled out at the moment, business in queens is not. Those of us here who read the A.B.J. and get the addresses of reputable queen breeders have been importing them and liking them for some time; the others can be reached through the pages of our own bee journal.

The Italian bee does well here, better I think than the native bee, which is now of mixed Italian and Dutch origin; the original native bee, a black, was wiped out by the catastrophic acarine disease some twenty years ago. I have tried Caucasians; they proved among other things too ready to produce laying workers, for my taste. So far I haven't had the opportunity to try Carniolans.

Chilldara.

# Plans For the Improvement of Honey Bee Stock

THE Bureau of Entomology and Plant Quarantine has just entered into cooperative relationships with The Honey Bee Improvement Cooperative Association with headquarters at Columbus, Ohio, for the purpose of fostering production and distribution of superior honey bee stock. Plans toward this end have been under consideration for several years and have finally culminated in the signing of a formal memorandum of understanding between the two organizations.

For a long time it has become increasingly obvious that the beekeeping industry is in need of better stock. Work of this kind will involve breeding and selection over a long period of time. Technical assistance and financial support on a scale normally beyond the reach of the private individual will be required. The Bureau has already made considerable progress in selecting and breeding superior lines of bees. To cooperate with the Bureau in wide-scale tests of such lines of stock under commercial conditions and provide a channel for making those lines found desirable available to the industry, a group of honey producers in Ohio recently organized The Honey Bee Improvement Cooperative Association and incorporated it under the laws of Ohio as a non-profit organization. Its members will be on the same footing as non-members with respect to any benefits to be derived from the project.

The new undertaking calls for the rearing of 4,000 to 5,000 queens a year which will be sold to cooperators for testing under practical honey producing conditions in different parts of the United States. These queens will be of selected lines or hybrids between these lines. The program further provides for the release to

queen breeders of breeding stock from any line or hybrid combination that definitely shows superiority under tests. The routine queen rearing phases of this new undertaking will be centered on the islands at the western end of Lake Erie where isolated matings of queen bees can be assured.

The Honey Bee Improvement Cooperative Association will furnish the bees and the beekeeping equipment needed to conduct the work and will handle the distribution of all queens to be used for testing and breeding purposes. The Bureau of Entomology and Plant Quarantine will make available certain breeding stock, will assign to the project certain of its technical staff, and provide some of the research facilities needed to rear and test large numbers of queens. Its personnel will select the best lines of stock, and have, in consultation with members of the Cooperative, general over-all charge of the technical phases of the work.

Any queens that are eventually placed in the hands of queen breeders will be either instrumentally inseminated or mated under closest supervision. Should a queen breeder desire to continue producing stock obtained from the project arrangements will be made to continue to supply that queen breeder with similar or better stock.

No system of certification of queen breeders who may wish to raise and sell stock obtained from the Cooperative is planned. It will be up to the queen breeders themselves to take the necessary steps, should they ever wish certification.

The queens produced for the testing work will be distributed by sale to honey producers in desired localities who are equipped to make such tests

and who agree to submit reports as may be necessary for the proper evaluation of the performance of the stock. No attempt will be made to rear queens for sale to honey producers to use merely for requeening purposes.

Queens made available by the Cooperative will not be guaranteed as to performance. The cost per queen will be above the prevailing market price.

The project is in reality pioneer work and as such will undoubtedly experience many headaches and changes before the work can be stabilized and operated in a satisfactory manner.

The charter members of The Honey Bee Improvement Cooperative Association are:

Roscoe Franks, President  
Ray Hiltner, Vice-President  
Emerson Long, Treasurer  
Chas. A. Reese, Secretary (Ohio State University B & Z Building, Columbus 10, Ohio)  
W. A. Coulter  
M. J. Deyell  
W. E. Dunham  
Stanley Fordyce  
Lloyd C. Gardner  
Cable Pepper

Dr. Otto Mackensen, of the Southern States Bee Culture Laboratory, will be in charge of the technical phases of the work, and Dr. W. C. Roberts of the North Central States Bee Culture Laboratory will assist him. It is planned to keep all bee journals informed as to the progress of the work and of any changes in procedure needed to keep the project sound and impartial.

Jas. I. Hambleton,  
Division of Bee Culture.

## Honey and Honey Cookery

Winston E. Dunham does it again. In Ohio Bulletin 282, from the Ohio State University Agricultural Extension Service, he takes honey to town in a big way. Honey is a food and sweetening agent—composition of honey—

flavor and color—honey in infant feeding—ways of using uncooked honey—cakes and cookies—breads, rolls, and muffins—pastries—desserts—salads—canning and preserving—confections—drinks—yum, yum!

And we mean it's good! Readers may obtain free copies by request from the Division of Bee Culture, Ohio State University, Columbus, Ohio.



(Left) The Queen Bee  
(Center) The Worker Bee  
(Right) The Drone Bee

## Man's Best Friend

*Perhaps the beginner and the experienced beekeeper too may like these picture stories. We hope that some help to the distressed amateur may result at least.*

THE hum of the bee! Surely you have heard it. Busy bees flying from flower to flower, collecting their load of rich nectar and pollen, working from dawn to dusk for mankind. The use of bees by man is older than recorded history and man's interest in the bee is as old as man himself. Why do they gather nectar and pollen? How do they live, work, and produce? What is the story behind the industrious, tireless work of these small winged insects?

The honeybee colony is made up of three individual types of bee—the **worker**, the **queen**, and the **drone**. These three carry on the functions of the colony, but before we look into the colony itself, let us first examine each of these types of honeybee.

### The Worker Bee

As its name implies, the worker bee is the laborer of the bee colony. The worker is an undeveloped female that is adapted for **nectar** and **pollen**

gathering but is not capable of reproduction. When you see a bee on a flower it is the worker bee which you see.

Like all other insects, the worker bee follows a complete metamorphosis in its development. It starts as an **egg**, which hatches into a **larva**. The larva grows and matures, spins a cocoon around itself within its waxy **cell**, and then changes into a **pupa**. The pupa spends its allotted time maturing and finally emerges from its cell as a full-grown **adult** worker bee. The complete time consumed in this metamorphosis is 21 days.

The function of the worker bee is clear from its name. All the work of the colony, with the exception of laying eggs, is carried on by these



(Above) From left to right—the egg which hatches into the larva and the stages in growth of the bee larva.

(Right) From left to right—the stages in development from the larva through the pupal changes.





(Left) A natural colony among the limbs of a tree. (Above) Hollowed out logs—Man's first beehive.

worker bees. They gather nectar and pollen; feed the young larvae; protect and warm the eggs, larvae, and pupae; bring water to the hive; build comb; and do countless other tasks. Because of this tremendous amount of work, their lifetime is short and in the heart of the summer **honeyflow** worker bees seldom live longer than 6 weeks.

#### The Queen Bee

The queen bee is truly the queen of the colony. The entire colony life is dependent upon her efforts, for without the eggs she lays the colony would soon die. She is the only perfect female in the hive, differing from the workers in that she has perfectly developed sexual organs and has the ability to lay eggs.

She passes through the same stages of development that the worker bee does. The difference between the queen and the worker is determined during the larval stage. A larva which is fed an extremely rich mixture of food, called **royal jelly**, develops into the queen bee, while the workers are fed a less concentrated food and remain as sexually undeveloped females. The time consumed in development from the egg to the adult is 16 days for the queen.

The queen bee has but one function in the colony and that is to lay eggs. Day after day the queen continues her tireless efforts, laying thousands of eggs which will develop into more bees. A superior queen has been known to lay as many as 3,000 eggs a day, but the usual average is from 1,200 to 1,800.

#### The Drone Bee

The drone bee is the male. He is easily distinguished from the others by the prominence of the two large compound eyes, larger than those of

the queen and the worker (one on either side of the head), and by his blunt abdomen. In size the drone falls between the queen and the workers—being larger than the worker and smaller than the queen.

The drone passes through the same stages as the queen and the worker—the only difference being that it takes the drone 24 days to develop from the egg to the adult bee.

The drone has only one function in the colony, that of mating with the queen bee. The queen mates only once in her lifetime (shortly after emergence as an adult) so it can be readily seen that after the queen is mated and laying the drone is a useless burden to the colony. The majority of the time the drone is in the way in the colony and as winter approaches the workers drive the drones from the colony so that they perish from cold and starvation.

#### The Colony and the Evolution of the Modern Hive

Put the workers, the drones, and the queen together, give them a home, and you have a colony of bees. The

number of bees in this colony may vary all the way from 15,000 to 100,000. Bees may be described as social insects, i.e., they band together and have a division of work among themselves. The queen carries on her function of egg laying and propagation of the species, the drone carries on his function of fertilizing and mating with the queen, and the workers carry on their innumerable functions of caring for the colony. The population of the colony is comprised of one queen, several drones, and thousands of workers.

In its natural environment the colony is found among the limbs of a tree, in a hollow tree, in a cave, or on the side of a cliff. With the advent of modern man with his houses and automobiles, colonies of bees have found their way into the sidewalls of houses, into automobiles, and even into some of our country mail boxes.

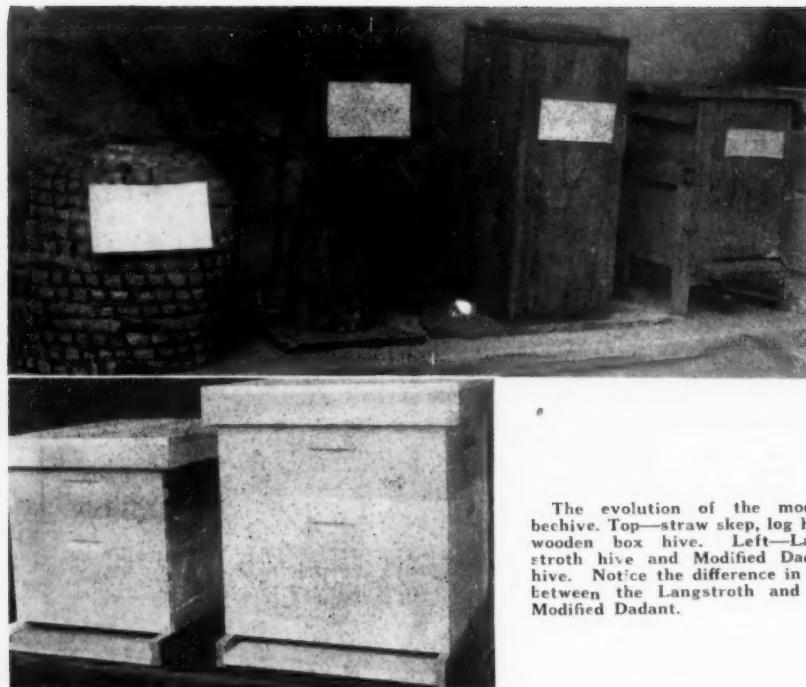
When man first found out that his sweet tooth could be satisfied with the honey produced by bees, it was a considerable task to gather this honey. He had to go out and find a **bee tree**, or a colony among the limbs and leaves of a tree, and take the honey away from the colony. To do this it was necessary to cut down or climb a tree.

Since so many of the colonies seemed to establish themselves in hollow trees, it seemed natural for the first beekeepers to establish their colonies in something identical. Hence the first bees kept by man were kept in logs which were hollowed out inside to make room for the bees.

As time went on and man's interest in the bee grew greater, there was a desire for some kind of container for the bees that would allow the bee-keeper to watch them at work within the colony. This was not possible



The straw skep, made of bundles of twisted straw



The evolution of the modern beehive. Top—straw skep, log hive, wooden box hive. Left—Langstroth hive and Modified Dadant hive. Notice the difference in size between the Langstroth and the Modified Dadant.

with the now outdated and outmoded log hives. To meet this need our beekeeper made a container of straw which was given the name of skep. These skeps were constructed of bundles of straw woven together into a somewhat dome-shaped basket. They had a hole in the top for the bees to fly from and the bottom was left entirely open. Because of this open bottom the beekeeper could lift up the entire colony and watch the bees at work inside. He could also easily remove the honey he wanted to eat by cutting it loose from the inside of the skep.

The use of the straw skep only served to whet man's interest in the bees still further. He saw the possibilities of obtaining more honey and of learning still more about these interesting little insects. If only the beekeeper were able to lift out and break apart the separate parts of the colony!

The honey, pollen, eggs, larvae, and pupae of the bee are all found in the bee comb. This comb is constructed of beeswax and is made up of cells. As can be seen from the picture these cells follow a concise, geometrical pattern. The comb is what those early beekeepers were interested in removing from the colony. They would remove the combs which were full of honey for their own table use or for sale—the draw-back being that many times the young larvae and pupae would be destroyed when the honey was removed.

In 1851, the Rev. L. L. Langstroth obtained a patent for his movable comb beehive and by so doing inaugurated the modern era in beekeeping. The bee comb in this new hive was cut to fit into a framework of wood—called a frame—which rested inside of a wooden hive. Because of this innovation the beekeeper was able to

remove the frames from the colony examine the brood (eggs, larvae, and pupae), and remove the honey without killing or seriously injuring the colony in the process. Additional hives set on top of the original allowed the bees to store their honey above the hive used for brood rearing. These additions to the top of the hive are called **supers**.

With the advent of the movable comb hive with its frames of wood came the demand for a **foundation** made of beeswax that could be placed in the frame and given to the bees. The bees would build their cells on this foundation and the result would be a perfect comb for their use. The first foundation was the invention of Johannes Mehring in 1857. With a crude press he took sheets of beeswax and impressed upon them the design of the bee cell. When these sheets were placed in the frames and given to the bees they built their cells upon the outline which the press placed upon the wax. There have been many refinements to this original process since the year 1857, most notable of which was the invention of a crimp-wired foundation by Dadant & Sons, in 1920.

The movable comb hive and the comb foundation soon brought about great changes in modern beekeeping methods. As more was learned about bees, and as bees themselves were improved by breeding methods, there came a demand for a larger hive than the original Langstroth. Larger colonies bring larger commercial crops, and larger colonies **need** this larger hive. When Langstroth first brought out his hive Charles Dadant began experimenting with movable comb hives. Following Quinby's example, Dadant soon saw the need for larger type hives and by the 1870's he had settled upon a design. This work of Charles Dadant was carried on by his son and grandsons and, in 1920, the Modified Dadant hive was placed on the market.

## DDT More Effective Than Lead-Nicotine

S. C. Chandler, of the Illinois Natural History Survey, reports on the comparative effectiveness of lead arsenate solutions and DDT in apple spraying. In 1947, six reports using standard checks were received. The average was 18.6% wormy in the lead-nicotine blocks and 5.7% in the DDT blocks, a ratio of 3.331. In 1946 the ratio was 2.821 and in 1945 it was the same as this year. In other words, there would be 2 1/2 to 3 1/2 times more worms

when lead nicotine is used in comparison with DDT.

This is good news to beekeepers because there is no doubt about their troubles from poison when arsenate is used. The chief stumbling block is to be assured that orchardists use the right percentages of DDT, at the right time; that dusts are not used in high wind to be carried to other blooming plants and so affect the bees. Permits for airplane dusting or spraying under supervision, as Minnesota now provides, would be wise in **every** state, until growers learn better use of chemical controls.



A group of beekeepers attending the Southern Conference held in Biloxi, Mississippi, November 27-28.

## The Southern Conference

By R. H. Dadant

THE following commentary about the program in brief give the high points of the conference.

At a special meeting with the breeders, discussion centered around improvement in quality of bees and how the breeders could help. Jim Hambleton, of the Federal Bee Culture office, explained the arrangements for breeding as outlined on page 25. The breeders decided their part in the work could best be handled through a bee breeders' association.

**Shipment of Package Bees**—Quick delivery of bees by air makes possible the elimination of feed and lower shipping weight. The cost compares favorably with rail shipment. The difficulties lie in the transporting of the bees from the breeder to his airport and from the last airport to the producer.

**Improvement of Stock**—Dr. Warren Whitcomb, Baton Rouge, considered a program for stock improvement. Controlled mating must be used. Breeders, however, can best improve their stock with isolated mating locations or induced, out-of-season mating. Testing and selection is where most breeders fall down. The

testing of a great number of daughter queens is advisable by the breeder.

**Artificial Insemination**—Dr. Otto Mackensen reviewed the artificial insemination program in the development of inbred and hybrid lines of bees at Baton Rouge and Madison, with 41 lines of inbred stock. Dozens of hybrid crosses have been tried but although more uniform they are not sufficiently better than common stock so far.

**Nosema**—(Jim Newton and W. A. Stephen) Nosema caused by a destructive protozoan can be indicated by bloat, dysentery, partial paralysis, general weakened condition of bees in colony, but certain diagnosis is possible only by microscopic examination. The disease is so common that few apiaries exist where traces of it may not be found. It reaches its height in late May when it attacks the preponderance of old bees in the colony. Damp and cold surroundings are conducive to its increase. Supercedure results often. Drugs have given little benefit. Heat seems to be the best way to combat it. Ninety-eight degree temperatures kill it. Hives should be in sunlight and in warm, dry places.

**Interstate Barriers**—(Clay Lyle, Mississippi) Louisiana, Florida, and Alabama have closed their borders to importations of bees on combs. A free country such as ours should not set up barriers to trade, however. Yet the difficulties in administering a law which permits entry with clean inspection permits are troublesome. To insure more fairness, state inspectors perhaps should not be chosen from the roles of active producers.

**American Honey Institute**—Miss McNaughton did a good job of telling everyone of the many ways the Institute serves the industry by getting honey mentioned in publications and on the air, and the distribution of booklets worth many times the dollars we put into our Institute.

**National Federation**—In meetings all over the country the Federation has interested the soil conservation service and pollination agencies. The beekeeper must become a pollination expert to get the most returns from the bees' services to agriculture. We must find out how to handle our bees to get as large as possible a per cent of the maximum seed production and prove to the seed producer that we are entitled to part of the increase.



This Jersey youngster, Lynn Deyo, as "Our Busy Bee" in parade, at Ridgefield Park, stole the show. Lynn is the niece of Sgt. at Arms Nicholas J. Lesner, of the North Jersey Association. Float took third prize.



To check colonies, leave the cover undisturbed. Break between first and second super. Give a quick look for needs, seeing two ways with one opening.

W. P. Kinard, Mississippi.



A frame of ripe cells with four bars, 15 cells to the bar. Dry grafting; cell chamber full of emerging bees; plenty of pollen and honey. Get about 40 well fed cells to sixty given. Geo. Moffit, Roseview Gardens and Apiaries, Ontario.

## Proposed Organization of Bee Breeders

The package bee shippers and queen breeders in attendance at the Southern Beekeeping Federation meeting in Biloxi, Mississippi, on November 27 and 28 joined in an effort to organize what has tentatively been called "The American Bee Breeders Association." The following committee was appointed to draw up plans for the proposed organization, M. S. Fortune, J. H. Girardeau, Jr., Nevin Weaver, E. C. Bessonot and W. E. Harrell.

The organization will no doubt come up for discussion at the meeting of the National Federation in Salt Lake City in January. The committee has also called a meeting of all bee breeders and queen shippers of the United States, to be held at Meridian, Mississippi, at 10:30, Monday, February 9, 1948, for the purpose of drafting a constitution and by-laws and perfecting the organization.

The primary objective is to foster and to promote breeding work on bees, toward improving the quality of the bees now in use in this country. It is proposed that the organization cooperate fully with all agencies who are at present working on bee breeding and that this work be supplemented by some breeding work by the association itself.

A secondary objective is to be the promotion of a better relationship between the honey producers and the package bee and queen breeders. To achieve this end, minimum standards covering the quality of queens and package bees will be set up. Ethical standards of advertising and customer relations will also be agreed upon.

It is planned that an association emblem will be created for use in advertising and on stationary by members who qualify by conforming to the standards established. It is hoped that the buyers of package bees and queens will come to recognize this emblem as a sign of reliability so that all reliable breeders will want to be members of the association and help out in this worthwhile work.

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## W. D. Achord

Another of our pioneer beekeepers, W. D. Achord, passed away in Findlay, Ohio at the age of 77. His first experience with bees was in the Apalachicola river section of Florida from which he moved to Fitzpatrick, Alabama. According to E. R. Root, Mr. Achord was the pioneer shipper of package bees, having made his start in the early part of the century. His success in developing a soft candy which could be used in packages assured his success. He remained for many years at that location increasing his operations and the quality of his stock as time went on. H. C. Short of Fitzpatrick took over the business in 1925 when Mr. Achord moved to Findlay, Ohio.

Bees, however, remained his love and he continued with them in a smaller way until his later years. In the earlier volumes of the bee journals the name of Achord was not uncommon as he was always anxious to impart to the bee-keeping fraternity what he had learned through his own operations.

Early ill health redounded to the benefit of beekeepers as he had been trained as a watchmaker and was forced to outdoor pursuits and eventually chose beekeeping as a profession.

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## That New Year in Beekeeping

The article in December, "A New Year In Beekeeping" has brought comment. W. B. Crump, Oakland, California, wants to know what brand of mead Brother Irving is in the habit of drinking since, if he finds its source, he wants to get a supply for himself. Irving just fancied the new things, most of which are even now partly in use, or on the near horizon of use, as having settled in the commonplace of practice, as indeed they eventually will do.

Mr. Crump says "there are many methods of doing things this day and age that should be common in practice. We might say that they are long past due." Or to quote from Irving, "the consumer knows that honey is the best sweet he can purchase and pays accordingly." That should be true right now—but it's our fault!

## Wisconsin Has New Licensing Law

At the recent meeting of the Wisconsin State Beekeepers' Association, James Gwin, chief bee inspector for Wisconsin, announced that Wisconsin has a new law which requires that anyone who sells honey must obtain a license. The license costs \$1.00 to those selling up to \$1,000 of honey, \$10.00 for those selling from \$1,000 to \$10,000, and to those selling honey in value greater than \$10,000 the cost is \$25.00. The money collected from these license fees will go into a revolving fund to be used for educational work, the enforcement of proper labeling, and to see that clean wholesome honey is placed on the market. It appeared from what was said that the law would not mean honey house inspection, but would mean inspection of honey at the retail level. Then, if honey was found that was dirty or otherwise unfit for human consumption, or mislabeled, the beekeeper would be taken to task, which likely would lead to inspection of his honey-handling methods.

Mr. Gwin also discussed Wisconsin's indemnity law which provides that beekeepers be paid \$3.00 per colony burned, provided he has paid taxes at the rate of 10 cents per colony, has not fed sulfa or in any other way tried to conceal or harbor disease. He reported that they only have paid out about \$300 in one year under this law.

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## The Breeding Program

The development of controlled mating in honeybees offers promise of substantial progress in the breeding of improved strains. Few queen breeders have the isolation necessary to insure that mismatching will not take place with undesirable stock.

It is too commonly assumed that apiaries placed two or three miles from other bees are safe from mismatchings. It is probable that drones will drift farther than the worker bees fly in their normal field activity. How far workers will go in search of forage is uncertain but there are numerous records which indicate a flight of six to eight miles.

In 1883, Mrs. Lizzie Cotton, a prominent beekeeper of that day, wrote that bees will fly seven miles for pasture. She reported that she had the first Italian bees in the section of Maine where she lived and that she could readily identify them in the field. She found it to be common occurrence for the bees to fly seven miles from the home apiary.

G. M. Doolittle reported that his bees flew two to ten miles from the home apiary to harvest a crop of honey from teasel. There are also reports of Italian bees placed on an island several miles offshore which commonly mated with black drones from the mainland. In the face of so many records one must be an optimist to expect to secure pure matings under ordinary conditions. With the new technique, the big problem is the selection of the individuals of the right quality.

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## 1947 Honey Crop Estimate

The bureau of agriculture economics at Washington, D. C. issued its October 8 estimates on the 1947 honey crop. It is estimated that the crop will be 210 million pounds or about 2% below 1946 and 10% below 1945 production.

The production is below last year in practically all regions in the country except the north Atlantic and south central areas.

Leading honey producing states in order are Iowa, Minnesota, California, New York, Texas, Wisconsin, Ohio, Florida and Michigan with Iowa and Minnesota leading the list with approximately 17 million pounds each.

It is estimated that in mid-September there were stocks of honey on hand of about 80 million pounds compared to some 42 million pounds on the same date last year.

Average production per colony is estimated for this year at 35.4 pounds the lowest since 1939. It compares with 36.9 pounds last year and a 5 year average of 40.7 pounds. There were 2% more colonies to gather the crop this year than last.



Mr. and Mrs. Gilbert Bourg, of the Gulf Coast Bee Co., found a run of fresh crabs at Gulf Isle. What to do with them? Go on to the next picture.



And here is the answer. It is a rest from queen rearing. Most of us don't play as we go. Should.



Tiger lily, abundant for pollen. Blooms when many other flowers bloom too. But lilies yield pollen in such quantity that they offer a chance for bees they are quick to take advantage of.

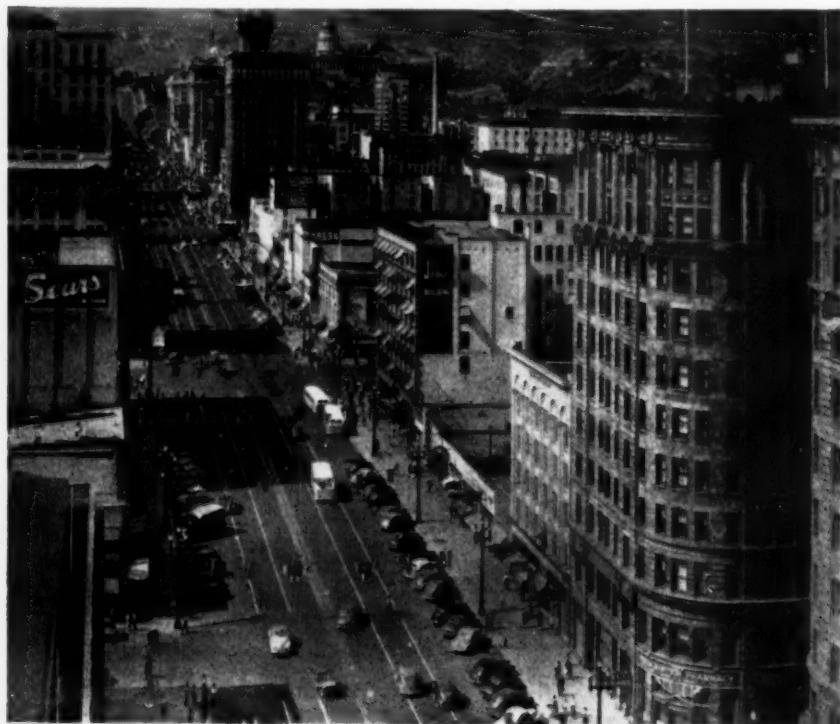
## FOR OUTSTANDING RESEARCH WORK IN BEEKEEPING



Two Missourians, Dr. Leonas Haseman, University of Missouri and L. F. Childers, beekeeper of New Franklin, were honored at the recent annual meeting of the Missouri State Beekeepers Association. They were presented pen and desk sets by the association for their work in combatting disease in honeybees. Each set was inscribed with the notation, "For Outstanding Research Work in Beekeeping."

The honor was primarily for their discovery of sulfa drugs as a control of American foulbrood. This disease had baffled the beekeeping industry for many years. Sulfa treatment is considered one of the greatest forward steps toward eliminating this problem.

Dr. Haseman and Mr. Childers came out with their treatment in 1942. Within three years, its use had spread over this country and throughout the world. Letters from 16 foreign countries and practically every state have been received asking for information on sulfa treatment.



## SALT LAKE LATCHSTRING OUT TO FEDERATION

Members of the National Federation of beekeepers will find the latchstring out when they meet in Salt Lake City, Utah, January 15 and 16.

Salt Lake City is one of America's most interesting cities. It is one of the few cities of the United States

with an outstanding historic pioneer past. It has a romance-awakening personality that has firmly established it in the mind of the American traveler as a center of unique interest, retaining, as it always will, the glamour of the "Old West."

Winter sport carnivals held in January and February in the canyons near Salt Lake and Ogden are becoming events of national importance. With the elevations ranging from 6,000 feet to more than 11,000 feet, and the skiing season extending from November to early June, six full months of skiing is offered at Alta on the finest snow and slopes to be found anywhere. Alta is listed as having the third largest winter sports use of any area in the United States on Forest Service lands.

At least two of Salt Lake City's landmarks are known the world over—the Tabernacle and the Temple of the Church of Jesus Christ of Latter-Day Saints, both located on Temple Square. This far-famed ten-acre plat is open daily.

At the head of State Street is Utah's Capitol, overlooking the entire city and valley. Of particular interest is the exhibition of pioneer relics in the Capitol. Here will be seen such things as the first spinning wheel used in Utah, and the first pianoforte hauled a thousand miles across the plains by ox team. Some of the present-day specimens of Utah's tremendous mineral and agricultural wealth are also displayed at the Capitol, and these provide a sharp contrast to the picture suggested by the relics of those first years of hardship.

# National Federation

## YOUR STAKE IN A NATIONAL FEDERATION

By Glenn O. Jones,

Secretary-Treasurer, National Federation of Beekeepers Associations.

Excerpts from a talk at the meeting of the Texas State Beekeepers Association, College Station, Texas, December 3, 1947.

Of all the activities of your national organization, the work of the Honey and Pollen Plants Committee is of special significance to the beekeepers of Texas. The committee, under the able leadership of R. B. Willson, has three principal objectives; to increase the value of our present sources of nectar and pollen through the development of improved varieties and strains; to bring about a wider usage of nectar and pollen bearing plants in the control of soil erosion, the planting of roadsides, ditch banks, railroad right of ways, as cover for waste lands, as ornamentals, etc., and to find new sources of nectar and pollen, sources that may prove of value as farm crops and be grown in large acreages.

The first open meeting of the committee was held at Atlantic, Iowa, in July of 1945 with an attendance of about fifty people. Among them were agronomists, horticulturists, botanists, soil conservationists, entomologists, farm operators and beekeepers from Iowa and surrounding states. The theme of the meeting was a closer cooperation between beekeeping and other branches of agriculture to the greater advantage of all. Out of the interest generated at that meeting there came, directly or indirectly, a greater amount of newspaper and magazine publicity on the value of bees in the pollination of farm crops than has ever appeared in any similar period of time.

The second open meeting of the committee, at the same place, in July

of 1946, drew attendance from 22 states and Canada. The increased attendance was accompanied by an increased interest in how the bees could contribute to our agricultural economy, bringing larger crops of fruits, berries, truck crops and, particularly, increased yields of our legume seeds. Here, again, the attendance was from all branches of agriculture and the emphasis was on a closer cooperation for the benefit of all.

Among those in attendance at this meeting was Dr. E. H. Graham, Chief Biologist of the Soil Conservation Service in Washington, D. C., and I mention Dr. Graham particularly because the soil conservation service has consistently given the beekeepers their finest cooperation, based, of course, on the fact that legumes are the very foundation of the conservation of our soil and that whatever helps the beekeeping industry to increase their total number of colonies will also help relieve the present critical shortage of legume seeds.

Some months following this second meeting there was a meeting at Washington of the regional biologists of the soil conservation service and serious thought was given to the need for greatly increased numbers of pollinating insects. Following this, the regional biologist for your area, Mr. Philip F. Allan of Fort Worth, Texas issued some mimeographed suggestions to the soil conservation personnel in his area, calling attention to the need for protection of native pollinators and the increase of honey-

bee populations, particularly in legume seed producing areas.

Following the suggestions of Mr. Allan, and with his assistance, a great many Texas beekeepers were contacted early in the year in an effort to secure larger numbers of colonies and greater concentrations of bees in legume seed producing areas that had too few bees to cover the acreage needing their attention and their services.

As a result, many thousands of colonies of bees were moved last summer to legume seed fields. In one case alone, five thousand colonies were moved to a single soil conservation district to furnish pollination to alfalfa.

Tracing this back through a maze of events, we can well say that many thousands of colonies of bees were moved to locations where they might best serve agriculture and the conservation of our soil resources as a result of the meeting of your Honey and Pollen Plants Committee at Atlantic, Iowa, in July of 1946.

This is part of your stake in your national organization.

Your Honey and Pollen Plants Committee is continuing to serve you and will continue to serve you, bringing to the attention of all agriculture the value of the service rendered by the honeybees and making it clear to all that any favors shown the bees in the planting of trees, shrubs, ornamentals, ground covers or farm crops will be returned many fold in increased yields of those crops that depend on insects for pollination.

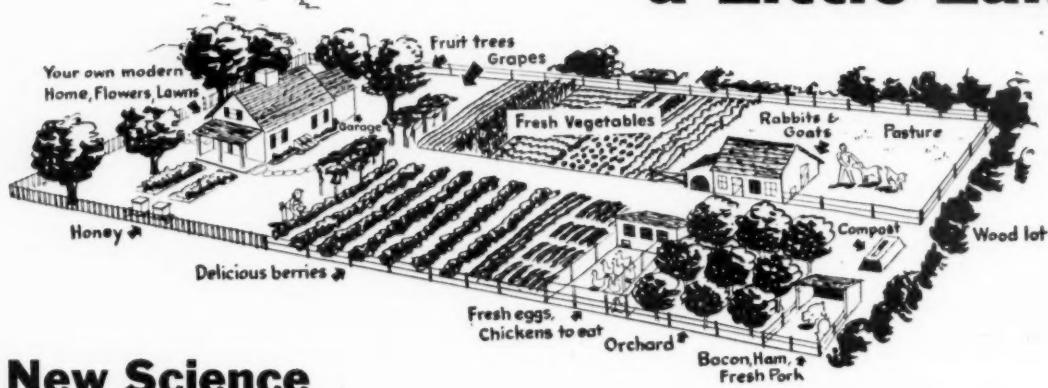
## Award to C. S. McReynolds (Minnesota)

In recognition of long continued contribution to the upbuilding of the state, C. S. McReynolds, president of the Minnesota Beekeepers' Association, was presented with the Minneapolis Star and Tribune award for leadership at

the annual convention in Minneapolis on November 10.

The award consists of a watch pendant inscribed "For Leadership in Minnesota" and a framed certificate recognizing his service. The Minneapolis Star and Tribune plan a series of similar awards to leaders of state business and trade associations holding conventions in Minneapolis.

# How To Do Wonders With a Little Land



## The New Science Miniature Farming

**At our miniature 2-acre farm we apply the latest scientific methods and discoveries.**

Doing this we are able to grow most of our family's food in a few hours of spare time a week—and we get great pleasure and profit doing it! Our scientifically designed miniature barn (16'x30') houses our milk goats, laying hens, broiler battery, rabbit hutches, maternity pens plus hay and feed . . . and cuts chore time to less than half an hour a day! Our miniature concrete pig pen is easy to clean, makes our two porkers grow almost before your eyes, cuts care time to a few minutes a day.

### Spare Time Profit and Pleasure.

New, easier methods of cultivation, scientific composting, manuring, pest control and new varieties of vegetables, berries, etc., make our garden produce like magic—with far less work! The new dwarf trees bear fruit two to five years sooner, take less room, are easier to cultivate, spray and harvest! New scientific feeds and new high-producing breeds give us more milk, more eggs, more meat at less cost with less work. New, inexpensive, miniature farm machines and small tractors take the drudgery out of small scale farming. (Perhaps you've seen the stories about our 2-acre miniature farm in Reader's Digest, Better Homes & Gardens, Saturday Evening Post, etc.)

### QUICK FREEZER MAKES IT PAY

Our house—especially designed for pleasant, productive country living—has a "Harvest Kitchen" your wife will love! Our quick freezer and other new household appliances and machines take the hard work out of country housekeeping—make this whole idea of growing your own food practical and simple for the first time in history—not just vegetables and fruits—but your own meats, milk, eggs, etc.

### Our "Have-More" Plan Gives You Complete Details For Only \$1.00

SEND FOR YOUR COPY!



This new, scientific way of living gives us Robinsons better living, better health, a better environment for children, more real pleasure and satisfaction, more money in the bank, more security and independence—more of just about everything worth living for!

**1** If you already have a garden, farm or country home—our Plan will tell you how to do wonders with the half acre or more around the house!

**2** If you now live in a city or town—our Plan will show you how easy, pleasant, profitable and practical it would be for you to keep your job and live on a little place or small farm in the nearby countryside!

**3** If you are a wife and mother—our Plan will show you what a wonderful life this is for your children as well as for you!

**4** If you are retired or planning to retire—our Plan will tell you how to convert a little spare time and the smallest of cash income into the happiest, most secure way of life that any man, old or young, that any family, large or small, could possibly want!

### Here's Expert Help On These and Other Subjects

How To Do Wonders with a Garden

Simplified Composting—Plowless Gardening

The New, Low-cost Garden Tractors

Grow Your Own Fruits, Berries, Grapes—Dwarf Fruit Trees

How to do Wonders with Chickens, Ducks, Geese, Turkeys, Rabbits

Broiler Battery and Laying Cage Management

Bees, to Give You Honey—Increase Your Yield of Fruits and Berries

Cold Frames, Hot Beds, and Small Greenhouses

Do Your Own Landscaping—Increase Value of Your Place 20% in 5 Years

Plans for an All-purpose Small Barn

Goats or a Family Cow—the Miniature Dairy

New, Simple, Sanitary Concrete Pig Pen

Special House Designs for Country Living

Scientific Layouts for Small Acreages

Plans for a "Harvest Kitchen"  
Built Around Your Quick Freezer

Rural Water Supply, Sanitation, Electricity, Driveway Building

Helpful Reference Books

255 Illustrations! 43 Fascinating Chapters! Mail this Coupon to Ed Robinson, Box 6101, Noroton, Conn.

**SEND NO MONEY**  
(Unless You Prefer To)

ED ROBINSON, Box 6101, Noroton, Conn.

Dear Ed: Please send me a copy of your "Have-More" Plan postpaid. If I decide to keep it, I'll send you one dollar full payment. If it doesn't please me, I'll send it back, owe you nothing, and we'll still be friends.

YOUR NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

If you'd prefer to send your dollar now, that will be fine—save me a lot of record keeping. I'll give you DOUBLE your money back if you return the plan for any reason in 10 days! That's how sure I am you'll like it!

# PREVIEWS

## OF COMING EVENTS

### National Federation Meeting, January 15-16

The National Federation of Beekeepers Associations will hold its annual meeting at Salt Lake City, Utah on January 15-16, 1948. There will be a meeting of the apiary inspectors and the committees of the National Federation at 10:00 A. M. on January 14 with general registration and sale of banquet tickets scheduled for 8:00 A. M., January 15. A busy and enlightening two days of activities are planned, ending in the annual banquet at 6:30 P. M., January 16.

### Bee Breeders to Form Association, February 9

A committee of the Southern States Beekeeping Federation has been appointed to draw up plans for a Bee Breeders' Association. The Committee proposes that the name of the organization be: The American Bee Breeders Association, also that the purpose of the organization be:

1. To cooperate fully with all agencies who are attempting to perfect and place in the hands of bee breeders improved stocks of honeybees and to set up a stock improvement project.

2. To study and disseminate all available information on improved methods of queen rearing and the shipment of package bees and queens.

3. To promote a better relationship between the Breeder and Shipper of package bees and queens and the Buyer.

4. The committee proposes that a standard emblem be created showing the name of the organization that may be used by all members on all advertising and stationery.

The committee asks that all bee and queen shippers in the United States be present at a meeting to be held in the County Court House at Meridian, Mississippi at 10:30 A. M., Monday, February 9, 1948, for the purpose of perfecting the organization.

J. H. Girardeau, Jr., Chm.

### Illinois Short Course, February 9-12

The University of Illinois will conduct a short course in beekeeping from February 9, 1948 through Febru-

ary 12, 1948. Lecturers will be V. G. Milum, University Apiculturist, G. H. Cale, Editor of American Bee Journal, C. E. Killion, Chief Apiary Inspector of Illinois, T. W. Millen, U. of I. Veterinary School, and officers of the Illinois State Beekeepers Association. Courses planned will be of interest to both beginners and experienced bee-men.

### Manitoba Short Course, January 26 to February 7

The University of Manitoba will conduct a short course in beekeeping from January 26, through February 7, 1948. Registration will be January 26th and the first lecture will be at 8:40 A. M., January 27th. The principal lecturers will be A. V. Mitchener, E. C. Martin and W. S. McLeod.

### Pennsylvania State Beekeepers' Association, January 14 and 15

Pennsylvania State Beekeepers' Association will hold its 45th annual meeting, January 14 and 15, 1948 at the Main Show Building, Second Floor, Room E, Harrisburg, Pennsylvania. There will be a banquet on Wednesday evening, January 14 at 6:30, to be held at the Colonial Park Evangelical and Reformed Church, three miles east of Harrisburg, on north side of U. S. Route 22, opposite Shoop's Memorial Ground.

### North Jersey Association, January 21

The North Jersey Beekeepers Association will meet at 8 P. M., Wednesday, January 21, 1948 in Room H of the Bergen County Court-

house. Members are assured that they will learn more about apiculture and have fun while learning.

R. A. Geoghegan, Sec.

### Bronx County Meeting, January 11

Bronx County Beekeepers Association will hold its regular monthly meeting, at the home of Mr. Frank Glazer, 3424 Gates Place, Sunday, January 11, 1948 at 2:30 P. M.

Sam Roberts, Sec.

### York-Cumberland Meeting, Portland, Maine, January 25

The York-Cumberland Beekeepers Association will hold a meeting at Presumpscott Grange Hall, Portland, Maine, on January 25, 1948 at 2 P. M. H. C. Meriam, Sec.

### Westchester County Association, January 18

The Westchester County Beekeepers Association will hold the regular monthly meeting at 2:30 P. M., Sunday, January 18, 1948, at the Odd Fellows Hall, 20 Lockwood Avenue, New Rochelle, N. Y. Election of officers will take place at this meeting.

B. F. Miller, Publicity.

### Nebraska Honey Producer's Association, February 3

The Nebraska Honey Producer's Association will hold its annual winter meeting at 9:30 A. M., February 3, 1947 in room 209, Plant Industry Building, University of Nebraska, 33rd and Holdredge Street, Lincoln, Nebraska. Speakers will bring messages on Bee Breeding and Honey Marketing.

H. F. Puppe, Sec.

### South Dakota Beekeepers Association, February 21

An annual meeting of the South Dakota Beekeepers Association will be held at 10:00 A. M., Saturday, February 21, 1948, in the community room of the county court house, at Mitchell, South Dakota.

H. E. Mose, Sec.



# American

Commercial State Bank Building,  
Madison 3, Wisconsin

## Honey Institute

HAPPY NEW YEAR! The American Honey Institute extends to every member of the bee and honey industry its heartiest wishes for health, happiness and prosperity in 1948.

\* \* \* \*

A resolution for the New Year: The American Honey Institute resolves to strive even harder in 1948 to promote the use of honey, to expand the honey market, and to increase its service to the honey industry.

\* \* \* \*

Have you made your New Year's resolution yet? There's still time to add another to your list. Resolve now to join the American Honey Institute and support its program of publicity for honey.

\* \* \* \*

The 1947 directory of members of the American Honey Institute will go to press on January 20. Your name should be included. If you have not yet paid your 1947 dues, be sure to send them in right away.

\* \* \* \*

This is a new year; time for a new calendar. Plan to slip honey calendars into your correspondence. It's a good form of publicity and one that is appreciated.

\* \* \* \*

There's a new trend in advertising. It's a trend toward friendliness. Being friends with your customer is a good way to keep them coming back.

One member of the Institute, for example, put up a holiday sign in his yard. Flanked by beehives and lighted Christmas trees, the sign bore his family's greetings to all for a "Honey of a Merry Christmas and a Sweet Happy New Year."

It was really just a public Christmas card, but it was good advertising, too. It created good feeling, and that means good prospects for future business.

\* \* \* \*

The membership of the American Honey Institute is growing fast. Many new members have joined in the last few months.

Every person who is a member of the Institute is helping to support a nation-wide program of honey publicity designed to put honey in every home.

\* \* \* \*

The words "custom" and "customer" are derived from the same root, and according to Mr. Webster, "custom" means: habitual course of action. The purchase of honey should surely be a habitual course of action.

Let's try this year to make every honey buyer a real honey "customer."

\* \* \* \*

Are you concerned about the prospects for selling your honey? Here's what one successful honey seller has to say:

"Judging by the offers of honey we are getting and the comments of beekeepers, local honey sales are dropping.

"Beekeepers seem to have forgotten how to promote honey sales during the war years when people were begging for any kind of honey at any price.

"Now I believe would be a good time for the American Honey Institute to increase its effort to reach **every** beekeeper with its fine price list of literature. Also to urge that any contemplated price cut below a fair price be invested in your fine literature. Old Favorites could be given as an inducement to buy two jars of honey and New Favorites with three jars. Seasonable folders with all sales.

"You have the literature to get all honey consumed if the beekeepers will only use it."

Honey literature is a valuable aid to every honey seller. It encourages repeat business.

Be sure to take advantage of the honey literature that the American Honey Institute makes available to you at cost. Write for your free price list today.

\* \* \* \*

Many doctors appreciate the value of honey and encourage their patients to use it freely. A good number of the requests for literature that are received at the Institute come from persons who have written for honey information at the suggestion of their physicians. One doctor recently ordered 150 copies of **New Favorite Honey Recipes** to give to his patients. Honey is doubly good: it is delicious and nutritious.

\* \* \* \*

If you have not yet seen a copy of the Institute's most recent recipe book, **New Favorite Honey Recipes**, why not send for one now? It is a most attractive book, plastic-bound and printed in orchid and green. It contains about 150 tested recipes, especially selected to make people want to use more honey. This book offers outstanding values in beauty and practicability.

Single copies are available at twenty-five cents each. Write to the American Honey Institute for prices on quantity lots.

\* \* \* \*

As delicious in the spring as in the fall, as delectable in January as in June, honey is a food that is good the whole year through. To the producers of honey and to the users of honey, may 1948 be truly a **HAPPY HONEY YEAR**.

**WE ARE BOOKING ORDERS FOR SPRING 1948**

Only 20% down, balance 10 days before shipping date. Prices as follows:

2-lb. package with queens..... \$4.00  
3-lb. package with queens..... 5.00  
4-lb. package with queens..... 6.00

**THE STAR BEE FARM**

Adolph Guiley, Prop.—Hessmer, Louisiana



**Soy Flour**  
**Pollen Traps**  
**Brewers' Yeast**  
**Dried Milk**

Also our famous K & S PRE-MIX  
**POLLEN SUPPLEMENT**  
We are distributors of Staley's Lo-  
fat High Protein Expeller Processed  
Soy Flour for beekeepers. Write  
for prices.

**Killion & Sons' Apiaries**  
PARIS, ILL.

**Package Bees  
For 1948**

•  
**PROMPT, FAST DELIVERY.**  
**UNIFORM TOP QUALITY.**

•  
**EUGENE WALKER**  
GRIDLEY, CALIFORNIA

**HIGH QUALITY, THREE-BANDED**

**Italian Bees and Queens**

Quantity	1-49	50-99	100-up
2-lbs. with queen	\$4.25	\$4.15	\$4.00
3-lbs. with queen	5.40	5.30	5.15
4-lbs. with queen	6.55	6.45	6.30
5-lbs. with queen	7.80	7.70	7.65
Extra queens	1.40	1.30	1.20

Try these bees for they will please.  
10% books order, balance 10 days before shipping date. Live delivery guaranteed.

**CARLUS T. HARPER**  
R. NO. 1, NEW BROCKTON, ALA.

**Indian River Citrus**

One bu. oranges, grapefruit or mixed.  
Prepaid east of Mississippi River, \$6.00.  
West of Mississippi, add 10%.

Will have Italian Queens \$1.25 for shipment after March 10th.

•  
**Dewey Apiaries**

MERRITT ISLAND, FLORIDA

**Packages**

**SUNKIST**

**ITALIAN**

Our bees and queens feed on natural stores. No forcing with sugar syrup. Breeders selected from colonies in the best honey producing section in the state. No second guessing. A good queen is Good anywhere—North or South. 10% books your order, balance 10 days before shipping.

Prices	1-25	25-up
2-lbs. package with queen	\$4.25	\$4.00
3-lb. package with queen	5.25	5.00
4-lb. package with queen	6.25	6.00
Extra queens	1.25	1.00

**SUNKIST BEE COMPANY : Convent, La.**

**Queens**

**Good News to All Beekeepers**

You will be glad to know that you can now buy the best in CAUCASIAN QUEENS, as I am again prepared, after the war interlude, to supply you in 1948.

Breeding stock selected from among 2,000 honey producing colonies in California and Nevada. Breeding Caucasians since 1928.

PRICE IS \$1.50 EACH

5% DISCOUNT FOR 50—10% DISCOUNT FOR 100 OR MORE

**THOS. S. DAVIS** Rt. 7, Box 3914, Sacramento, Cal.  
(FORMERLY DAVIS BROS.)

**DIXIELAND'S  
LEATHER COLORED ITALIANS**

**PACKAGE BEES AND QUEENS**

Booking dates open in April and May

	Queens	2-lb. Pkg.	3-lb. Pkg.	4-lb. Pkg.
1-24	\$1.40	\$4.50	\$5.85	\$7.20
25-99	1.30	4.25	5.55	6.85
100-up	1.20	4.00	5.25	6.50

**DIXIELAND APIARIES : GREENVILLE, ALA.**

**RED STICK APIARIES & CO.**

MEMBER LOUISIANA RETAILERS ASSOCIATION

**Package Bees and Queens**

Twenty-seven Years as Commercial Queen Breeders.  
Oldest Combless Package Bee Shippers in Louisiana.

**Disease Resistant Stock-Italian Bees & Queens**

2-lbs. with spring bred laying queens

\$4.25

5.25

3-lbs. with spring bred laying queens

1.25

Extra queens—any number

Fall flow queens available. Booking open—for April 1st to 10th and 20th to 30th and May 1st to 10th and later until July 1st.

WHY PAY MORE FOR THE BEST

BOOK EARLY—PLANNING WITH ENTHUSIASM IS THE  
ESSENTIAL OF SUCCESSFUL BEEKEEPING

**RED STICK APIARIES & CO.**

MAIN OFFICE, 113 LEE AVENUE

**DONALDSONVILLE, LOUISIANA**

Telegraph Western Union

**Renew Your Subscription NOW**

# Crop and Market Report

By M. G. Dadant

## Movement of Honey

In tabulating the replies on the movement of honey, about 70 to 75 per cent of our reporters indicated that the movement was from "slow to very slow." Twenty per cent reported "fair to slow" and less than 10 per cent reported "better to good." Many of our reporters indicated that they thought that the movement of honey would be better after the first of the year, and in normal times this is generally the case. Also, a number reported that honey would move much better as soon as some of the old honey was clear of the grocers' shelves. Complaints were made by a number of reporters that poor grades of honey had been purchased during the summer by some stores and at high prices. Because these stores were trying to sell this honey without loss, the movement of new honey is handicapped.

z =

We should not lose sight of the fact that the housewife, for the first time in several years, has been able to get all of the sugar that she needs and at a very reasonable price as compared to other foods. We should also remember that the commercial users of honey, bakers and others, have been weaned from honey because prices were so high, and it will be a comparatively slow process to get such users to again purchase honey. Selling efforts will have to be made and prices on commercial honey will have to settle to a level that will in some measure compete with prices of other sweets that are now used. This, of course, should be true only of the commercial amber grades. Good white honey should continue to be in demand for table use.

There is a big variation the country over in retail selling prices. On the 1 pound jars sold at retail, 50 per cent of the reporters indicated prices of 40 cents and above, the extreme high by one reporter being 79 cents. Forty-five per cent reported prices of 30 to 40 cents, and less than 5 per cent reported prices lower than 30 cents, the extreme low being 25 cents. On the 5 pound container, the average was very easily \$1.50 per 5-pound pail, with prices running as high as \$2.50 and as low as 99 cents. Undoubtedly,

quality had considerable to do with the variation in these prices as also did the locality and competition. On 10-pound pails, the price was largely \$2.50 to \$3.00, with very few going much over \$3.00, but some as high as \$4.00 per 10-pound pail and some as low as \$2.15. Because much of the honey sold by the producer at retail moves in 5-pound and 10-pound pails, it is surely a good sign that most of these producers are getting around 25 to 30 cents for their honey when sold direct to the consumer in these larger packages.

As to prices being offered for honey in wholesale quantities, the range on white honey is from 15 to 22 cents, mostly, however, from 17 to 20 cents. The American Bee Journal office knows of a number of lots that have been moved at 19 cents and 20 cents within the last thirty days. Buyers, however, are not active, and undoubtedly are holding off until they see just what the market will do after the first of the year. Good white honey is apparently in fair demand, the supply not too great, and should move at a good price for bottling. One of the largest bottlers indicated that he had a considerable quantity of white honey on hand but that there would be no trouble in moving it.

Amber honey prices are uneven, running from 10c to 17c, with a large crop through the Middle West so that this particular honey has yet had little chance to move.

## Honey Carry Over

During the period of sugar rationing there has been no difficulty in moving all of the honey produced. We must remember that there should be some carry over to take care of a twelve-month demand. It is bad not to be able to supply honey to customers when they want it. We must not be alarmed if all of the 1947 crop is not moved by the time the new crop comes in. On the other hand every effort should be made to advertise honey so there will be a constant demand throughout the year.

## HONEY WANTED

Cars and less than cars  
Top Prices

C. W. AEPPLER CO., Oconomowoc, Wisconsin

## FOR SALE

BRIGHT YELLOW AND THREE  
BAND QUEENS

GRAYDON BROS.

RT. 2 GREENVILLE, ALA.

## SEASON'S GREETINGS

A. H. Rusch & Son Co.  
REEDSVILLE, WISCONSIN  
MANUFACTURERS—JOBBERS  
BEE SUPPLIES

## THANKS

for helping make 1947 our best season.  
Doing all humanly possible to better  
serve you in 1948. Begin shipping of  
queens May 20th. No packages.

WHITE PINE BEE FARMS  
ROCKTON, PENNSYLVANIA  
Home of Northern-Bred Italian Queens

## Modern Beekeeping

The picture magazine of beekeeping.  
We show you with pictures how to do  
the job easier, quicker, and better.  
Special inventor's page.  
One year, \$1.00. Free sample copy.

MODERN BEEKEEPING  
PADUCAH, KENTUCKY

## CAUCASIANS

2-lb. pkg. \$5.00. 3-lb. pkg. \$6.00.  
No extra queens until May.

D. T. WINSLETT  
1018 Sonoma Ave.  
NO. SACRAMENTO 15, CALIFORNIA

## Italian Queens and Package Bees

We are now booking orders for 1948  
delivery, only 20% with order, balance  
10 days before shipping date. We  
guarantee live delivery and health  
certificate with each shipment. Prices  
as follows:

2-lb. package with queen \$4.00  
3-lb. package with queen 5.00  
4-lb. package with queen 6.00

Clover Bee Farms  
HESSMER, LOUISIANA

## The John M. Davis Strain Italian Queens

Bred the Davis way. Guaranteed to  
please or your money refunded, you be  
the judge. A good queen is PRICE-  
LESS. A poor queen is Worthless.

### QUEENS

Untested April 15 to June 1, \$1.25 ea.  
Tested April 15 to June 1, \$2.50 ea.

Untested only after June 1, 1.00 ea.

Why not try these queens and see  
for yourself that it pays to buy your  
queens at

LITTLE'S APIARIES  
P. O. Box 122, SHELBYVILLE, TENN.  
"Where Quality Reigns"

# It's a Good Idea

This time of year to gather up all your old comb and cappings and have them rendered into beeswax before the wax moths consume any part of it. We charge only 2 cents a lb. for rendering when your old comb or cappings weigh 100 lbs. or more (net), 3 cents on smaller shipments. We are buying clean beeswax today at 43 cents a lb. delivered.

We are always buying honey. Send SAMPLE, state how much you have and quote your best price. We remit promptly for honey or wax shipments.

Send for our money saving price list on bee supplies.

## The Fred W. Muth Co.

229 Walnut Street

Cincinnati 2, Ohio

## EPHARDT HONEY FARMS

RT. 2, BATCHELOR, LOUISIANA

### Package Bees with Carniolan Queens

APRIL AND MAY DELIVERY BY EXPRESS

2-lbs. bees, young laying CARNIOLAN QUEEN	\$4.50
3-lbs. bees, young laying CARNIOLAN QUEEN	5.50
Extra CARNIOLAN QUEENS	1.35

We offer 4,000 packages, 10,000 queens

## Italian Queens and Package Bees

Prompt service, live delivery, health certificate with each order and above all we guarantee satisfaction.

Young queens with each package of bees.

1 to 24	25-49	50 up
2-lbs. each	\$4.25	\$4.05
3-lbs. each	5.25	5.05
Queens, each	1.25	1.20

ALVIN J. DUCOTE  
HAMBURG, LOUISIANA

## McCORD FRAME-GRIP

Patent Pending

A light weight, handy instrument used for loosening and removing frames from the hive with one hand. Price \$2.50, plus 15c postage fee. Shipping weight 12 oz. Satisfactory discounts for dealers.

McCORD MFG. CO.

RT. 2, BOX 866, SAN JOSE, CALIFORNIA

1911 DUPUIS 1948

### Package Bees and Queens

We solicit large and small orders. THREE-BANDED ITALIANS

95% Baby Bees and 5% Teachers at following prices

2-lb. package with queen	\$4.50
3-lb. package with queen	5.85
4-lb. package with queen	7.20
5-lb. package with queen	8.50

DUPUIS APIARIES  
BREAUX BRIDGE, LA.

# PACKAGE BEES with Queens

## ITALIANS

PRICES—WITH QUANTITY DISCOUNTS	
1-9	10-49
2-lb. pkg. with queen (each)	\$4.50
3-lb. pkg. with queen (each)	5.65
4-lb. pkg. with queen (each)	6.80
Queens (each)	\$1.35. Tested \$2.00.
	WE SERVE TO SERVE AGAIN

BY EXPRESS

## SUNNY SOUTH APIARIES

MARKSVILLE, LA.

I. CLARK, Prop.

## Dadant's Surplus Foundation A Standard of Perfection

This foundation gives each section a delicate center that blends perfectly with every bite. Remember, a well-pleased customer is an asset.

SOLD BY ALL LEWIS-DADANT DEALERS  
Dadant & Sons :: Hamilton, Ill.

# Postscript

Some very interesting news comments have recently appeared in the newspapers regarding some research in Russia among persons of great age. According to the story as published here it has been found that many of the Russians who have reached the advanced age of 100 years or more are peasants who use honey as an important part of their diet. Since the honey is usually chunk honey cut from the combs near the brood nest it contains much stored pollen. The conclusion is that the pollen may be very important in extending the life of the consumer. Who knows but the beekeeper may one day be keeping bees for the production of pollen in preference to honey?

An Iowa reader inquires how long it would take a single bee to gather a pound of honey if she could live that long. The question was referred to Dr. O. W. Park who has given much time to the study of honeybee activity. He replies that the bee must gather two pounds of nectar to make one pound of honey; that 30,000 trips are necessary to bring in the two pounds of nectar and that the bee makes about ten trips per day. "Thus if it were possible for a single bee to gather a pound of honey, she would need to work all day long, 365 days in the year for more than eight years and to fly a distance equal to more than twice around the world at the equator."

In watching the field bees when visiting the flowers in the test garden I have noticed that they often visit about ten to twenty flowers per minute. When we estimate the number of flowers visited in storing 100 pounds of honey or more in a worth-while crop it requires astronomical figures for the computation and emphasizes the importance of the bees in pollination.

A. H. Alex, of the Texas Research Laboratory, sends a specimen of *Dalea argyraea* with some interesting comments regarding the plant. It is found in Texas from the Rio Grande to the Nueces and westward. Because the rabbits and farm animals are so fond of the foliage it is only in pro-

tected places that it attains full bloom. It thrives in dry situations and where it is plentiful offers good bee pasture from September to November. The plant is attractive as an ornamental and one Texas nursery now offers it for sale. It is doubtful whether it would stand northern winters but is highly desirable in the Southwest.

From the Holy Land comes word that the Palestine Beekeepers Association has appointed a honey plants committee with C. H. Kalman as chairman. It is the plan to have a test garden in Palestine somewhat similar to the one in which we find so much interest in this country.

From J. H. Kauffman, of Eustis, Florida, comes this report regarding the new clover: "All of the Pellett clover died out in sand and also on acid muck. We planted some where there was muck and marl and it grew beautifully until sometime in July when it was dug up and eaten roots and all, by what from the tracks looked like otters. This was planted on the edge of marsh."

Thus we have another report which indicates little success of the plants on acid soils. Indications are that it requires alkaline soil and succeeds best in the North although there have been some rather surprising reports of good results in the Texas panhandle. Many more trials will be necessary before we know the adaptations of this most promising legume.

George A. Semple, of Hamilton, Scotland, tells an interesting story of a plot of Helichrysum grown for seed by a nurseryman near his home. The plant grows about three feet high and blooms from June to August. If the weather is warm the bees visit the flowers by thousands. His location is unusual because of the great expanse of flowering plants offered by the nursery. There is something for the bees all through a long season. In addition he has the usual amount of dandelion, white clover, hawthorne, and lime trees.

Beekeepers near large nurseries or seed farms often find unusual bee pasture which is unusually dependable because of the variety available.

FRANK C. PELLETT.

## HIGH GRADE ITALIAN BEES AND QUEENS

Packages for 1948. Booking orders now

### BENNETT BEE FARMS

1504 N. Main St., Hattiesburg, Miss.

### G. B. Lewis Wooden Goods!

Dadant's famous crimp wired foundation. Catalogue on request. Productive Italian package bees and queens, April and May. No deposit required.

### Dotson's Apiaries

3059 W. Roxboro Rd., N. E., Atlanta Ga.

### Do you know about the

### LORD'S ACRE PLAN

for support of the rural church? Get monthly reports of it in the

### Farmers Federation News

3 years \$1 or send 2 cents stamp for sample copy. Address ASHEVILLE, N. C.

### Southern Beekeeper (Magazine)

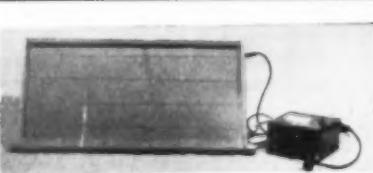
HAPEVILLE, GA.

"Southern in scope—  
National in influence"

### The Good Earth Magazine

Newly appointed magazine of the San Bernardino County Honey Producers Association. Read about California beekeepers and their allied interests, the agriculturists of California. Articles by real dirt farmers for farmers. Send \$1.00 for one year's subscription.

THE GOOD EARTH MAGAZINE  
P. O. Box 1066 RIALTO, CALIFORNIA



**SUPER WIRE IMBEDDER**  
Finger-tip heat control  
Price, \$11.50. Wt. 3 1/2 Lbs.  
R. P. EASTON  
1227 Cornell Ave., Hillcrest,  
Binghamton, New York

### Italian Package Bees and Queens

	1-24	25-49	50 up
2-lb. bees with queen	\$4.50	\$4.25	\$3.95
3-lb. bees with queen	5.50	5.25	4.95
Queens	1.25	1.15	1.10

We guarantee live delivery, satisfaction, and a health certificate with each order. Due to an increase in colonies we are able to ship more package bees this spring. A 10% deposit books your order, balance 10 days before shipping date.

**OSCAR ARNOUVILLE**  
BOX 35 HAMBURG, LOUISIANA



Above photo shows a portion of one of our queen yards containing over 6000 nuclei.

## 1948 ITALIAN BEES & YOUNG QUEENS 1948

20,000 packages and 40,000 queens will be ready for shipment to you during April and May. Place your order early.

### PRICES—WITH QUANTITY DISCOUNTS

	1 to 9	10 to 49	50 to 99	100 & above
2-lb. pkg. with queen (each)	\$4.50	\$4.25	\$4.15	\$4.00
3-lb. pkg. with queen (each)	5.65	5.40	5.30	5.15
4-lb. pkg. with queen (each)	6.80	6.55	6.45	6.30
Queens (each)	\$1.35.	Tested \$2.00		

NO ORDER TOO LARGE NONE TOO SMALL TO BE APPRECIATED

**OVERBEY APIARIES : Bunkie, La.**

## TANQUARY'S Italian Bees & Queens for 1948

TANQUARY'S Bees and Queens for good crops.  
Heavy honey production requires strong, hardy  
BEES AND QUEENS

### PRICE LIST FOR 1948

Quantity	1-5	6-49	50-99	100-up
2-lb. packages bees with queens	\$4.50	\$4.35	\$4.20	\$4.00
3-lb. packages bees with queens	5.65	5.50	5.25	5.00
4-lb. packages bees with queens	6.75	6.50	6.25	6.00
5-lb. packages bees with queens	7.75	7.50	7.25	7.00
Queens (Postpaid)	1.35	1.30	1.25	1.20

Tested Queens, any number, (Postpaid) \$2.00

Queens clipped at no extra cost. Queenless packages, deduct price of queens

Our shipping dates are filling up fast, order early, send \$1.00 per package deposit, balance, ten days before shipment is made. Health certificate furnished with each shipment. TANQUARY'S bees and queens will do the job for you. BEE WISE, ORDER EARLY.

**TANQUARY HONEY FARMS, INC.**  
LENA, SOUTH CAROLINA

# LOOK!

Here is a peep into the future. Here is a beekeeper uncapping a super of honey the new way. The frames are nailed in and the entire super will be placed into the extractor for extracting.

I know this sounds screwy, but, two beekeepers with 600 colonies each are making this system work. I tell you about this in the January issue of MODERN BEEKEEPING and show you with clear, sharp pictures how it is done. Possibly you will not want to keep your bees this way but you can learn many points from this and other articles that appear monthly in our PICTURE MAGAZINE of the industry.

Send in your subscription now and say start with the January issue so as to read about this article.

**Subscription Rates: One Year \$1.00  
Two Years \$1.50 Three Years \$2.00**

## MODERN BEEKEEPING

Paducah, Kentucky

Walter T. Kelley, Editor



HOPING FOR YOU A  
PROSPEROUS 1948

### We Are Offering You Package Bees

to replace your winter loss or make increase. This is our whole thought and business, so we are qualified to supply you with bees and queens that are bred to produce honey.

Orders are shipped as near on time as the weather and conditions of nature will permit.

#### 1948 PRICES AS FOLLOWS:

2-lb. package with queen	\$4.30
3-lb. package with queen	5.50

10% deposit with order, balance ten days before shipment is made.

All orders acknowledged at once. Notice mailed same day of shipment.

**Rossmann & Long**

Box 133

MOULTRIE, GA.

## HONEY SERVERS

Filled with honey make a fine gift or store honey display

### No-Drip Server

Has a plastic top and a plastic cut off. Best of the cheaper servers. Specially suited to quantity sales.

No. 427 No-Drip 16 oz. size. Each 25c; Doz. \$2.50.

### DRIP-CUT SERVERS

Genuine drip-cut server with a plastic top and the genuine finely made precise metal cut-off. The best made.

No. 616, capacity one pint. Each 75c; Doz. \$6.00.

No. 632, capacity one qt., each \$1.00. Doz. \$9.00

All postage extra. Mailing wt. 1 lb.

**DADANT & SONS**  
Hamilton, Ill.

# Classified Advertisements

## BEES AND QUEENS

Bill Atchley's famous queens and nuclei, they really make you money. Untested February, March, and April, \$1.50 each; May, June, July, \$1.25 each. Nuclei all sizes, April, May, and June delivery, at special low prices quoted upon request. A real bargain in single story colonies for May and June delivery. Wm. Atchley, 500 E. Ninth St., Upland, California.

**HIGHEST QUALITY** dark Italian queens. Order now for spring delivery. Price \$1.25 each. Special rate over 100. 20% deposit holds shipping date. Atherton Apriaries, Kenedy, Texas.

**THREE-BANDED ITALIAN** bees and queens for 1948 with apiary inspection certificate. Write for information and price circular. Cottage Hill Apriaries, Rt. 2, Mobile, Ala.

**LANGE'S FINE ITALIAN** queens give the best in satisfaction. Write for prices and open dates. Lange Apriaries, Rt. 2, Box 23W, Mission, Texas.

**ITALIAN** package bees and queens for March and April delivery. Three pound package of bees with queen \$5.75. Queens \$1.40 each. John M. Brose, P. O. Box 36, Felton, Calif. Phone Santa Cruz 32-W-2.

**GREEN'S** profit-producing queens will please you as they have pleased hundreds of others. Famous the country over. Where could you do better? Price, \$1.00 each. D. P. Green, Rt. 2, DeLand, Florida.

**CARNIOLAN** and **CAUCASIAN** package bees. April and May delivery. 2-lb. pkg. \$5.00; 3-lb. pkg. \$6.00. Tillery Bros., Greenville, Alabama.

**PACKAGE BEES AND QUEENS**—2 pounds with queen \$3.50; 3 pounds with queen \$4.50; queens, Indrio Italian. \$1.05 each. Walter D. Levorette, P. O. Box 364, Fort Pierce, Florida.

**JOE'S ITALIAN BEES AND QUEENS** for spring delivery, 2 lbs. with queen \$4.00; 3-lbs. with queen \$4.90; 4-lbs. with queen \$5.75. Queenless pkgs. deduct \$1.00 per package. No deposit required to book order now. Live delivery and health certificate guaranteed. Joe Roy Apriaries, Hessmer, La.

**BREWER'S LINE-BRED CAUCASIAN QUEENS**—We have closed our queen yards for 1947. Now booking orders for April delivery. 30c deposit on each queen at time of booking. No package bees. BREWER BROTHERS APIARIES, 3818 Caucasian Circle, Tampa, 6, Florida.

**PACKAGE BEES, QUEENS, Italians.** Circular free. Crenshaw County Apriaries, Rutledge, Alabama.

## HONEY AND BEESWAX WANTED

**WANTED**—Clover extracted and comb honey. Any quantity. State price in first letter. C. Jankowski, Prairie View, Illinois.

**WANTED**—Light extracted honey in 60's clover preferred. J. Jones, 115 West 82 Street, New York 24, N. Y.

**WANTED**—Clover, alfalfa and amber honey in carload lots or less. Send sample and quotation. Alexander Company, 819 Reynolds Rd., Toledo, Ohio.

**HONEY AND BEESWAX. HIGHEST PRICES PAID.** MAIL SAMPLES, ADVISE QUANTITY. BRYANT AND SAWYER, LOS ANGELES 21, CALIFORNIA.

**HIGHEST CASH PRICES** paid for all grades extracted honey. Prairie View Honey Co., 12303—12th St., Detroit 6, Mich.

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department it should be so stated when advertisement is sent.

Rates of advertising in this classified department are ten cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers we require reference of all new advertisers. To save time, please send the name of your bank and other reference with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease or state exact condition, or furnish certificate of inspection from authorized inspectors. Conditions should be stated to insure that buyer is fully informed.

**WANTED**—Extracted clover honey in 60's. B. I. Evans, Windom, Minnesota.

**WANTED**—Extracted honey, white or light amber, in 60's. Ed. Heldt, 1004 W. Washington St., Bloomington, Illinois.

**HONEY WANTED**—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & COMPANY, 1360 Produce Street, Los Angeles, California.

## HONEY FOR SALE

**SWEET CLOVER HONEY** in sixty pound cans, carload lots. Also few hundred cans of Buckwheat honey. Shipping point Bruce, South Dakota. Address J. D. Overbey, care Box 471, Woodville, Mississippi.

**FINEST CLOVER**, 60-lb. can at 25c; 10 cans at 20c. Mixed clover and heartsease at 20c; 10 cans at 15c: Tom Beddoes, 318 Alliance Ave., Rockford, Illinois.

**HONEY SALE**—Carload lots or less. Clover, Buckwheat, Heartsease, Basswood or Alfalfa. Box WIS, care American Bee Journal.

100 60-lb. cans good grade clover and thyme mixed, 15c here. Honey Brook Apriaries, Coxsackie, N. Y.

**FOR SALE**—Thirty thousand pounds clover honey in new cans. Silver Hive Apriaries, Dunlap, Iowa.

12,000 lbs. of fall honey. Also foundation mill 12" roller. Henry Gentner, West Valley, New York.

**STAR THISTLE**—100 cases packed in one and two pound jars. Meets fancy grade. Make offer. George Cain, Aggre Villa J-1, Davis, California.

1000 60-lb. cans good flavor honey, one-half white, rest light and medium amber. Price, white 18; light and medium amber 16c. W. A. Dismukes, P. O. Box 343, Crystal City, Texas.

**FINE QUALITY** Northern New York white clover honey in 60's at honeyhouse, not cased, at 20c. Cased and F.O.B., 21c on ten case lots or more. Sample 20c. A. J. Wilson, Hammond, N. Y.

**HONEY** packed in 1-2-5 lb. jars 60 lb. cans. Write for prices. John Tideswell, 2711 North 63rd Street, Omaha, Nebraska.

**BEST SWEET CLOVER** honey in 30 60's and 100 5's. Best offer takes it. Roy Bunger, Council Grove, Kansas.

**FOR SALE**: Fall honey in new 60lb. cans at 20c per lb.; Edw. Hogan, 210 Gibson St., Canandaigua, N. Y.

1000 new sixties A1 white sweet clover honey, 20 cents lb. K. & A. Apriaries, Iola, Kansas.

**FOR SALE**—Amber extracted, new sixties, mild flavor. Write for prices. N. B. Queren, Bellevue, Ohio.

**RASPBERRY BLOSSOM HONEY** \$14.00 per 60-lb. can; \$3.00 per 10-lb. pail; \$1.50 per 5-lb. pail. F. O. B. Boyd, Wisconsin, Frank Reith.

**HONEY** (best grade) for sale in large quantities 25c lb. in your containers. E. R. Raley, Box 1610, Daytona Beach, Fla.

## FOR SALE

**BEES FOR SALE**—45 colonies free from disease, with new equipment for 150 colonies. Located in my own groves, Pinellas County, Florida. Citrus flow begins last of February; also Palmetto flow in April. C. T. Williams, 10500 Gulf Blvd., Treasure Island, St. Petersburg, Florida.

**BEE EQUIPMENT FOR SALE**, 10 and 12-fr. 1 extractor, 1 wax melter. Some used and some new. Roy A. Berry, Box 46, Fowler, Indiana.

**FOR SALE**—25 stands of bees. Closing out my apiary packed for winter to be moved next spring. Price right. A. E. Norton (age 80 years), Rowley, Iowa.

90 colonies bees, 10 frame, two story, heavy with honey, 400 deep supers drawn comb. Other equipment. State inspection. Honey Bee Farm, Rt. No. 1, Hoopeston, Illinois.

300 hive bodies 10-frame, disease free, 50c each. James Anderson, P. O. Box 158, Mt. View, California.

650 colonies, two story, \$16.00 with locations, clover territory Jefferson Co., N. Y. Made seventy tons since 1945. No disease. Extra supers \$4.00; shallows \$2.50. Will sell land, buildings, equipment. Reason for selling—business in Florida. E. Gamble, Box 259 G. Route 6, S. Jacksonville, Florida.

60-lb. honey cans, mostly used once, in used shipping cartons, 25c per can with carton. J. Wolosevich, 6315 S. Damen Ave., Chicago, Illinois.

**ABOUT MAY** 1st—130 or 140 swarms of bees, nearly all 2 stories. Lots of new foundation. Nearly all new hives. Extra equipment, as 25-frame extractor, tanks, knives, veils, smokers, etc. If interested write to John Egbert, Ten Sleep, Wyoming.

10 Modified Dadant hives flat, cypress bottoms, galvanized covers. 15 assembled bottoms and covers flat. Ira Lubbers, Cedar Grove, Wisconsin.

1500 standard 10-frame supers with drawn comb; 500 California migratory style redwood covers; also 500 migratory style bottom boards. New Superior 8-frame extractor, 12 inch baskets. Inspection certificate furnished. Poor health reason for sale. Write C. A. Wener, Roseau, Minnesota.

10 FRAME cypress bottom boards, underside creosoted, \$1.00 each. Not creosoted, 90c each. All nailed up. C. O. Lundin, Rt. 2, Box 275, Pine Bluff, Arkansas.

**FOR SALE**—1000 full depth supers, painted, wired frames, \$1.50 each. Fred Marquette, Thief River Falls, Minnesota.

800 colonies bees, with complete equipment for operating them. Located in southeastern North Carolina. Good locations for honey production, or ideal for dividing early in spring and moving north or west for clover honeyflow. Box C.R.D., care American Bee Journal.

**FOR SALE**—25,000 mill run Lewis sections 3 1/2" x 6 1/2" scalloped 4 sides 1/4" inch at \$14.00 per thousand, f.o.b. Hamilton, Illinois. Dadant & Sons, Hamilton, Illinois.

**HIVE BODIES**, covers and bottom boards, bee shipping cages and nuclei hives. All supplies new and knocked down. Price list furnished on request. A & B Supply Company, Coffee Springs, Alabama.

**FOR SALE**—Standard 8 and 10 frame bee hives. Number 1's, \$1.05 each. Hoffman frames \$8.00 per 100. Four cleat covers, 80c each. Bottom boards, 80c each. K. D. and F.O.B. factory. Write for catalog. Satisfaction guaranteed. Hagen-Lunceford Mfg. & Supply, 2500 North Fourth Street, Coeur d'Alene, Idaho.

**ELECTRIC uncapping knives** in stock, \$12.18 postpaid. Quick shipment. Walter Kelley Co., Paducah, Kentucky.

**Dadant Foundation and Lewis supplies** in turn and as available. **SWISHER MARKET**, Lewis-Dadant Dealer, P. O. Box 806, Springfield, Ohio.

### WANTED

**WILL LEASE** 1000 colonies with plenty supers on share basis. Man to furnish labor and truck. Box 16, American Bee Journal.

**WANTED**—Bees with equipment. Must be disease free and reasonably priced. L. A. Dusek, Cameron, Texas.

### POSITIONS AND HELP WANTED

**WANTED**—Helper for medium sized commercial honey producer. Methods and equipment modern. No experience necessary. Need help about March-November. State wages expected first letter. The Hoffmann Apiaries, Janesville, Minnesota.

**MAN WANTS** year around or seasonal position with comb or extracted honey producer in a Northwest state. Have 25 years experience. Willet Smith, Llano, Texas.

**WANTED**—Reliable experienced man, steady work, good wages. Large modern outfit. Can use two helpers. Box M. W., American Bee Journal.

**WANTED**—Experienced young man, single or married, to work for us in 1948, with view of working on shares following season. Box 75, care American Bee Journal.

### SEEDS AND TREES

**RAISE YOUR OWN** trees and shrubs from seed for shade, windbreak, prevention of soil erosion, etc. Write for prices and information. Woodlot Seed Co., Norway, Mich.

TRY the new Pellett Clover. Place your order for root divisions for spring shipment. See ad on page 10. Melvin Pellett, Atlantic, Iowa.

**SEEDS** of Honey Plants. GOLDEN HONEY PLANT, 2 ounces \$1.00,  $\frac{1}{4}$  pound \$3.00; ANISE HYSSOP, ounce \$2.00,  $\frac{1}{4}$  pound \$5.00; CHAPMAN HONEY PLANT,  $\frac{1}{2}$  pound \$1.00, 3 pounds \$5.00. Postpaid. Circular on request. Melvin Pellett, Atlantic, Iowa.

**BIRDSFOOT TREFOIL**, good legume and honey plant for permanent pastures. Good seed \$3.00 per pound postpaid. Write for quantity price. Melvin Pellett, Atlantic, Iowa.

**EXPERIENCED** and **INEXPERIENCED** help needed in package bee production for 1948 season. Also queen breeder. Year around job right parties. F. E. Morrison, Rt. 2, Box 103, Auburn, California.

**YOUNG EXPERIENCED MAN**, able to manage apiary if occasion requires, for season of 1948. Permanent if satisfied. South Dakota or Montana. Box N. S., care of American Bee Journal.

**NECTAR** and **FOLLEN-YIELDING TREES**, **SHRUBS** AND **PLANTS** for your section. Write for our descriptive illustrated folder and order items wanted before being sold. Shipping all winter. **NICOLLET COUNTY NURSERY**, St. Peter, Minnesota.

**PORTER BEE ESCAPES** are fast, reliable, labor savers. R. & E. C. Porter, Lewis-town, Illinois.

**WRITE FOR CATALOGUE**. Quality bee supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries. Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

### SUPPLIES

**FICKUP BEEKEEPER'S WHEELBARROW** picks 'em up and sets 'em down. Wheel them up a plank on to truck. Has large rubber tire. Send for circular. Paul W. Johnson, Rt. 2, Peru, Indiana.

**BEEKEEPER'S SUPPLIES**. May we quote you. Simeon B. Beiler, Intercourse, Penn.

**VENTILATING BEEHIVE COVERS**, fully adjustable for winter or summer. It has built-in insulation. Write for descriptive folder. George Watkins, Box 373, Austin, Minnesota.

**SUPPLIES FOR SALE**—500 new standard 10-fr. dovetailed shallow extracting supers, with Hoffman grooved top bar frames, \$1.85 each; empty super shells, \$1.00 each F.O.B. Lots 50 or more. A-1 white pine K.D. material in factory packed cartons. Immediate shipment. Cash. Southeastern Apiaries, Nahunta, Georgia.

**SMOKER CANE** made of steel. Stick cane in ground, slip smoker off as needed. Fits all standard size smokers. \$1.00 each postpaid. Paul W. Johnson, Rt. 2, Peru, Indiana.

**SIMPLEX TRAP** clips queens without handling. \$1.75 postpaid. **INSTANT FRAME SPACERS**—seven-eight-nine, specify size. \$1.50 postpaid. Free circulars. George Ley, 36 Jackson Street, New Rochelle, N. Y.

**FRAMES**, Western Pine, standard brood and extracting, Hoffman style. \$8.00 per hundred. Quantity prices on request. Prompt shipment. Arizona Hive Parts Co., Florence, Arizona.

**ATTENTION BEEKEEPERS IN MINNESOTA** and adjacent states. We offer a real service on Lewis-Dadant bee supplies, honey containers and labels at a large saving to you. Top market price paid for extracted honey and beeswax. **HONEY SALES COMPANY**, 1806-08 NORTH WASHINGTON AVE., MINNEAPOLIS 11, MINN.

**HONEY WANTED**  
Carloads and less than carloads.  
Mail sample and best prices in all  
grades.  
**C. W. AEPPLER COMPANY**  
Oconomowoc, Wisconsin

**CLEAN UP AFB** with sulfa. 25 tablets 50c; 50, \$1.00; 100, \$1.50; 1,000, \$6.00. Free circular, quick shipment. **WALTER T. KELLEY CO., PADUCAH, KENTUCKY.**

**YOUR WAX WORKED** into high quality Weed process medium brood foundation for 22 cents pound; 100 lbs. \$18.00. Fred Peterson, Alden, Iowa.

**MECHANICAL DEVICE** for applying paste to labels. Fast and efficient. 50c each postpaid. Dealers write for prices. Paul W. Johnson, Rt. 2, Peru, Indiana.

### MISCELLANEOUS

**INTERESTING, NEW, DIFFERENT, PROFITABLE** magazine. For the backlotter, suburbanite, and part-time farmer. Write: **BACKYARD FARMER**, 223 Bellis, Duluth 3, Minnesota.

**ATTRACTIVE HONEY LABELS** gummed—1000 \$2.50. Samples stamp. Brooks, B120J, Arkansaw, Wisconsin.

**POEMS WANTED** for musical setting. Send poems for immediate consideration. Hamann Service, 660 Manhattan Building, Milwaukee, Wisconsin.

**RANCH MAGAZINE**—Do you find it difficult to secure information about sheep and sheep ranching methods? The **SHEEP AND GOAT RAISER** reaches more sheepmen with more information on range sheep than any magazine published. Subscription \$1.50. Hotel Cactus, San Angelo, Texas.

**THE BEE WORLD**—The leading bee journal in Great Britain and the only international bee review in existence. Specialize in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents, stamps. Membership of the Club, including subscription to the paper 10/6. The Apis Club, The Way's End, Foxton, England.

**INDIAN BEE JOURNAL**—The only Bee Journal of India. Sample copy against 25 cents (or 1s 6d) postage stamps. Yearly 7s. 6d. (\$1.50) international M. O. Apply—Bhupen Apiaries (Himalayas), Rampur, Dist. Nainital, U. P., India.

**HONEY LABELS**  
Improved designs, embodying color,  
balance, simplicity, and distinction.  
Please send for free samples & prices.  
**C. W. AEPPLER COMPANY**  
Oconomowoc, Wisconsin

### ITALIAN QUEENS . . . BEES

Line bred since 1927. Queens raised from stock of 200 to 300 lbs. after pulling bees all spring until up into July. Queens mated to drones from similar selection.

	Queens	2-Lb.	8-Lb.
1-24	\$1.40	\$4.50	\$8.65
25-50	1.30	4.25	8.45

**LARGER LOTS, WRITE  
FOR PRICES**

Homer W. Richard, Rt. 3, Box 252-A, El Dorado, Ark.



### The Hive and the Honeybee

A complete descriptive preview of this amazing new book is now ready for you . . . No cost—Just mail a postal.

650—6x9 inch pages, hundreds of pictures. Sturdily made to last. Timed to meet the needs of today.

Book Price \$4.00  
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### American Honey Plants

Here it is—the brand new revised edition of **FRANK C. PELLETT'S** work on honey plants

Most of the parts of earlier editions have been entirely rewritten and some hundred or more plants listed.

Price \$6.00 Postpaid  
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Happy New Year  
from  
**GEO. E. SMITH**  
*producer of*  
**Northern California**  
**Package Bees and**  
**Queens**

Rt. No. 2, Yuba City, California

**1896 - 1948**

**A**LONG ABOUT THIS TIME EACH YEAR WE ARE COMPLETING THE UNFINISHED BUSINESS OF THE OLD YEAR AND LOOKING AHEAD TO THE NEW YEAR WITH RENEWED EFFORT AND CONFIDENCE.

WE TAKE THIS OPPORTUNITY TO THANK OUR CUSTOMERS FOR PAST BUSINESS AND WELCOME THE NEW ONES.

May we express our appreciation by wishing "one and all" A Happy New Year, and ask that you join with us in looking forward to the new year with pride in our desire to serve.

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**MARSHFIELD MFG. CO., Inc.**  
**MARSHFIELD, WISCONSIN**  
(The Heart of America's Dairyland)

**Let Us Supply Your Container Needs**

\$50.00 orders—5% discount  
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**GLASS AND TIN**

1/2-lb. jars, carton 24, wt. 9 lbs.	.67
1-lb. jars, carton 24, wt. 12 lbs.	.78
2-lb. jars, carton 12, wt. 11 lbs.	.53
5-lb. jars, carton 6, wt. 10 lbs.	.47
5-lb. tin pails, carton 50, wt. 25 lbs.	4.10
5-lb. tin pails, carton 100, wt. 46 lbs.	7.30
10-lb. tin pails, carton 50, wt. 44 lbs.	6.10
60-lb. sq. cans, carton 24, wt. 72 lbs.	9.10
Two 60-lb. sq. cans in wooden reshipping case	1.40

Label paste for glass or tin—60c per can.

Label samples and prices sent on request.

**COMB HONEY CARTONS**

For 4 1/4 x 1 7/8, 4 3/4 x 1 1/2 and 4 x 5 sections

**CELLOPHANE WINDOW CARTONS**

\$1.55 per 100; \$6.65 per 500; \$13.20 per M.

**DECORATED CELLOPHANE WRAPPERS**

\$1.15 per 100; \$4.95 per 500; \$9.85 per M.

— Also —

Wooden display and reshipping cases for comb honey  
WRITE FOR PRICES

Prices F. O. B. Boyd, and subject to change without notice

**AUGUST LOTZ COMPANY**

MANUFACTURERS AND JOBBERS  
OF BEE SUPPLIES

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**HONEY EXTRACTORS**

We manufacture extractors and other honey house equipment designed to help you produce high grade honey.

WRITE US FOR  
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P. O. BOX 249 MARSHFIELD, WISCONSIN

FOR THEIR SUPERIOR STRAIN OF

**Disease Resistant  
Queens and Package Bees**

THE

**Iowa Beekeepers' Association**

STATE HOUSE, DES MOINES, IOWA

Received EARLY ORDERS for the 1948 season and  
REPEAT ORDERS from the 1947 season.

Write now for information and prices.

Wishing You  
A  
Happy  
and  
Prosperous  
New Year

THE A. I. ROOT CO. OF IOWA  
COUNCIL BLUFFS, IOWA

## When you buy bees what do you look for?

**QUALITY:** Which means a good strain of Bees, good Queens, full weight young Bees, light cages.

**SERVICE:** Handling your order in a businesslike manner, shipping your bees and queens on time, if humanly possible; giving especial attention to any claims and making prompt adjustments.

**RELIABILITY:** There is a lot of satisfaction in dealing with a firm that has specialized in package bees and queens for well over a quarter of a century, knowing that your interest is our interest, and you keep us in business.

We are ready to serve you in 1948. Bees are in good shape, cages are almost ready.

### ITALIAN CAUCASIAN 1948 PRICES

Through May 20th

	Queens	2-lb.	3-lb.	4-lb.	5-lb.
1-24	\$1.40	\$4.50	\$5.85	\$7.20	\$8.55
25-99	1.30	4.25	5.55	6.85	8.15
100-up	1.20	4.00	5.25	6.50	7.75

Queenless Package—Deduct Price of Queen

**The Stover Apiaries**  
Mayhew, Miss.

## For 1948 You Want Young Highest Prime Quality Package Bees and Queens Our droneless packages and young queens satisfy

Improved strain of three-banded Italians backed by over 25 years; careful selecting, breeding, and shipping to all points in U. S. A. and Canada.

Our breeding and mating stock is carefully picked and tested out for the coming season each year from hundreds of best-by-test colonies, which gives you benefit of each season's improvements when buying from us.

We are booking orders for the season of 1948, plan your requirements for this coming season and place your order early, we are working each day from now on to fill your orders promptly with the very best of QUALITY by test, let us know of your 1948 requirements.

ORDERS BOOKED 20% DOWN PAYMENT, BALANCE DUE 10 DAYS BEFORE SHIPMENT.

	Queens	2-lb.	3-lb.	4-lb.	5-lb.
1-24	\$1.40	\$4.50	\$5.85	\$7.20	\$8.55
25-99	1.30	4.25	5.55	6.85	8.15
100-up	1.20	4.00	5.25	6.50	7.75

### H. A. FARMER APIARIES

Cottonwood, Ala. : Phone 2582

TELEGRAPH AND EXPRESS OFFICE,  
DOTHAN, ALABAMA

## JENSEN'S

"Magnolia State" Strain

### Italian Package Bees & Queens

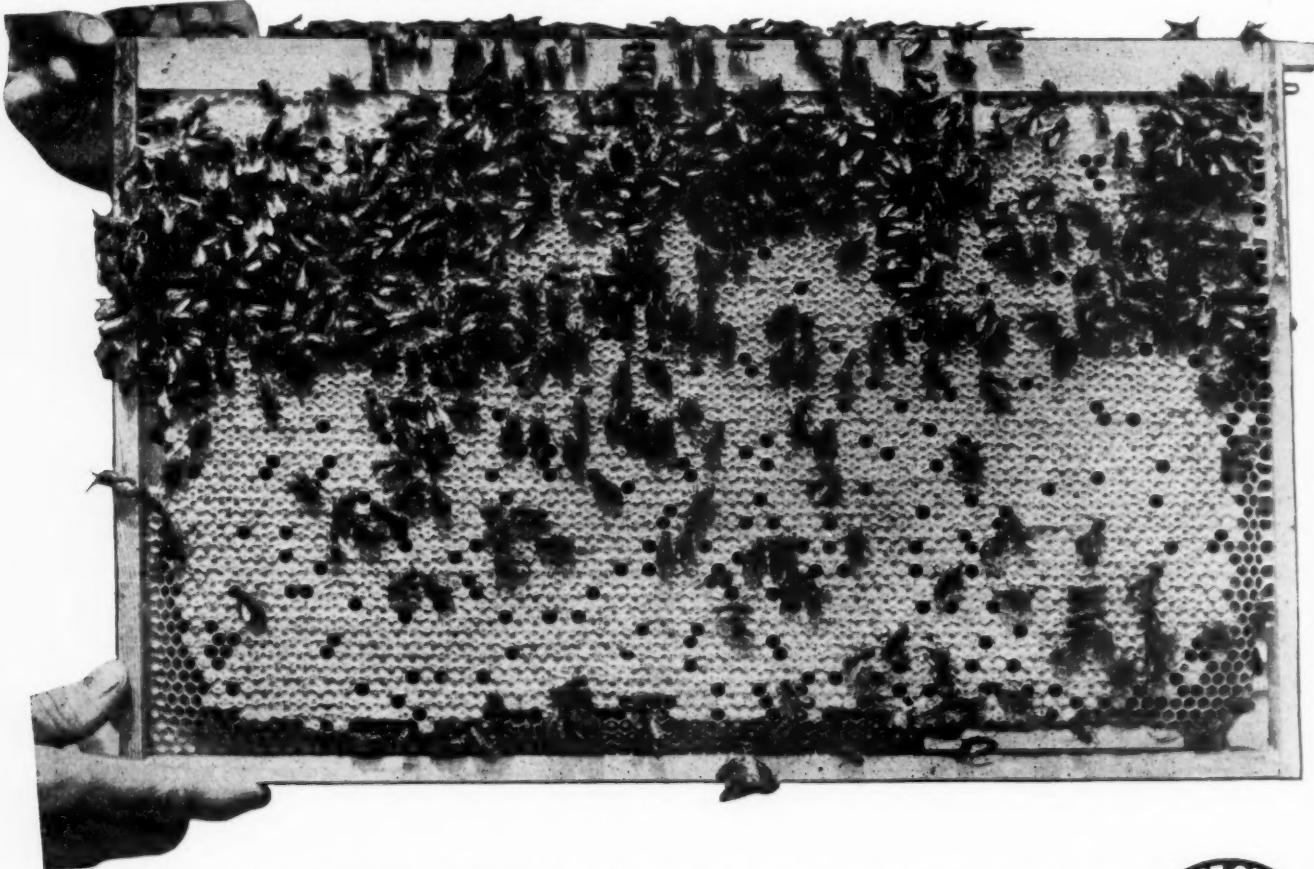
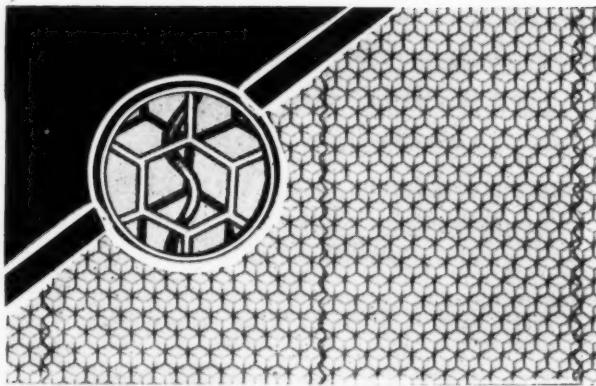
Dates filling up fast, but if you want to try some of the stock that has made a big hit in many localities, we invite you to write for commitment, and we will tell with reasonable accuracy what we can do for you. Our daily capacity will be considerably stepped up in 1948 over former years.

Prices	Queens	2-lb pkgs.	3-lb. pkgs.
		with queens	with queens
1-24	\$1.40	\$4.50	\$5.85
25-99	1.30	4.25	5.55
100-up	1.20	4.00	5.25

### JENSEN'S APIARIES

MACON, MISS.

The business QUALITY built.



## Combs That Do So Much ..... And Cost So Little

When you use **DADANT'S CRIMP-WIRED FOUNDATION** you get combs that, with good care, will last almost as long as your equipment.

Combs built from Dadant's Crimp-wired Foundation are a long term investment. They will last for years of crops and many colony buildups. Each sheet of this sturdy foundation starts to save you money the moment you put it in the hive and it goes on saving steadily, year after year.

Too, you get full worker combs. The best queens can't get bees from poor combs.

But, put good queens and good combs together and watch the bees pour out. The strong colonies you get will bring in the greatest possible amount of honey.

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When you want quality comb honey, remember Dadants Superlative Surplus, the Finest made. . . . And Dadant's Plain (unwired) Foundation for those who need it.



## DADANT & SONS HAMILTON, ILLINOIS

**Makers of FAMOUS FOUNDATIONS**  
**Crimp-Wired — Plain — Surplus**

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Be sure to get our 1948 bee supply catalog. Have your name put on our mailing list now.

# Garon's Package Bees and Queens

## PRICES FOR 1948

### ITALIANS

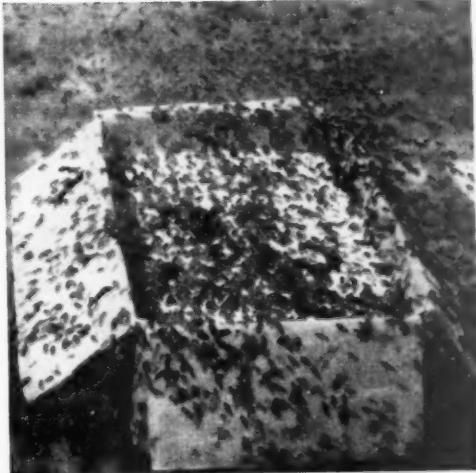
	1-9	10-24	25-99	100 up
2-LB. WITH QUEEN	\$4.40	\$4.25	\$4.15	\$4.00
3-LB. WITH QUEEN	5.55	5.35	5.25	5.10
4-LB. WITH QUEEN	6.70	6.50	6.40	6.30
QUEENS	1.35	1.30	1.25	1.20
Additional charges for A.F.B.				
RESISTANT QUEENS	.30	.25	.20	.20

Our Italians are Three-Banded and our Disease Resistant Queens are Daughters of TESTED RESISTANT BREEDERS Mated with Drones of TESTED RESISTANT MOTHERS. Write for full particulars.

Only actual extra cost will be added to above prices should price of sugar be materially increased.

**GARON BEE COMPANY** PHONE 8614 **Donaldsonville, La.**

## POLLEN SUBSTITUTE



Dry pollen substitute is so easy to feed. Simply mix the two flours and place in an open tub, hive cover or any shallow container available in front of the hives any day when the bees are flying, starting in February north of the Ohio River and earlier farther south.

By feeding pollen substitute the bees will build up faster and be all around in better shape. Figure 5 pounds of substitute per colony and order now as freight is moving slowly. Proper mixture is one part of yeast to 6 parts of soy flour.

5-lb. bag yeast	\$ 1.50	Wt. 7-lbs. F.O.B. Paducah
25-lb. bag yeast	5.00	Wt. 27-lbs. F.O.B. Paducah
100-lb. bag yeast	15.00	Wt. 103-lbs. F.O.B. Paducah
25-lb. bag soy flour	\$3.00	Wt. 27-lbs. F.O.B. Paducah
100-lb. bag soy flour	7.95	Wt. 103-lbs. F.O.B. Paducah

### DETAILED INSTRUCTIONS WITH EACH SHIPMENT

**WALTER T. KELLEY CO.**  
BOX 210 : PADUCAH, KY.

### 1948 GOOCH'S ITALIAN QUEENS THAT PRODUCE 1948

5,000 packages and 15,000 queens will be ready for shipment to YOU in the early spring. Bright Yellow and Three-Banded Italians, EACH QUEEN THE DAUGHTER OF A QUEEN THAT PRODUCED 300 LBS. OR MORE OF SURPLUS HONEY IN ONE SEASON, AND MATED TO DRONES OF EQUAL QUALITY.

PRICES	1 to 10	11 to 50	51 to 100
Queens, each	\$1.40	\$1.30	\$1.15
2-lb. package with queen	4.50	4.20	4.10
3-lb. package with queen	5.60	5.30	5.20

Full weight packages, young laying queens and live delivery guaranteed. PROFITABLE BEEKEEPING BEGINS WITH GOOCH'S QUEENS.

**JESSE E. GOOCH & SONS : Rt. 3, Pine Bluff, Arkansas**

## LEATHER ITALIAN BEES AND QUEENS

We are booking  
Orders for 1948

Prices to be quoted later, subject to your approval. No Deposit required. Every queen and package guaranteed.

**The Rich Honey Farms : Jeanerette, La.**

# Science in Farming

*Science in Farming* is the name of a book which has recently been published by the United States Department of Agriculture. It covers the calendar years 1943 to 1947, inclusive, and contains abbreviated reports of many agricultural experiments undertaken during those years.

This book was prepared primarily for farmers, but the authors had in mind, also, other persons whose interest and work have to do with beekeeping, housekeeping, gardening, chemistry, stock raising, etc. This book should be particularly useful, as is pointed out by the authors, to returning servicemen who want to build or enlarge businesses of their own.

If you are a resident of United States of America, a complimentary copy of this book can doubtless be obtained gratis from your Congressman. If his supply has been exhausted, a copy may be obtained by writing, Superintendent of Documents, Washington 25, D. C., by describing the book "Science in Farming." The cost is \$2.00.

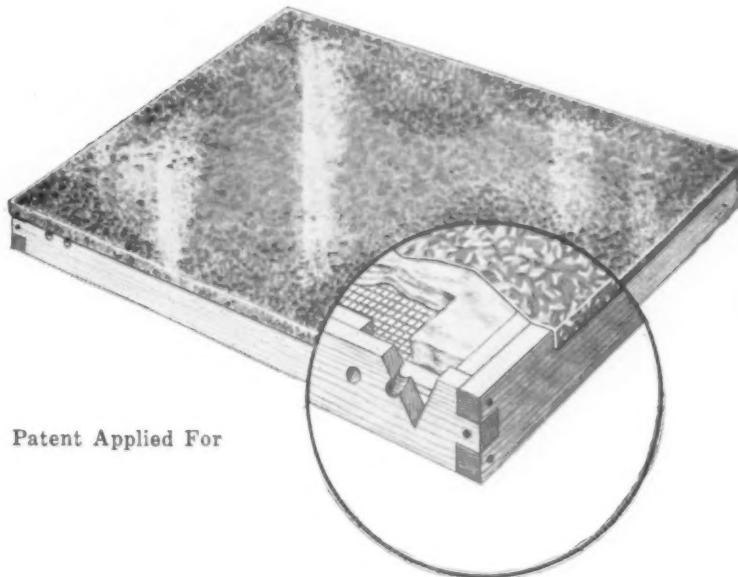
Our business is the production and sale of package bees and extra queens. If your bee shipping service was unsatisfactory during the past year, we invite your inquiry. Our price per package is two dimes and one nickel above the average, but we believe you will find the quality of our service well worth the difference.

**Southern Apiaries and Supply Co.**  
**Chatom, Alabama**

"Beeware's" Latest Contribution  
to Better Beekeeping . . . . .

## The New Lewis "I-V" Cover

**"I"**  
is for  
Insulation



**"V"**  
is for  
Ventilation

**"For better beekeeping buy BEEWARE"**

because only in BEEWARE\* do you get

1. Every dovetail bored for nailing.
2. V-shape metal frame rests.
3. Rot-proofed hives.
4. "I-V" Covers—(they insulate! . . . they ventilate!)

There is a Lewis-Dadant dealer of BEEWARE\* located near you  
—buy your needs from him or contact us for further information

**G. B. LEWIS COMPANY : Watertown, Wisconsin**

BRANCHES: COLONIE & MONTGOMERY STS., ALBANY 1, NEW YORK  
1117 JEFFERSON ST., LYNCHBURG, VIRGINIA

214 PEARL ST., SIOUX CITY 14, IOWA

\*Reg. Trademark of the G. B. Lewis Company

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**A good demand and a product that cannot be equaled**



**FOR COMB HONEY PRODUCTION ask for Root Supplies**

**SECTIONS**—that look and fold right.

**THIN SUPER FOUNDATION**—light in color with the true cell base.

**SUPERS, CARTONS AND ACCESSORIES.**

Write for free booklet, "HOW TO PRODUCE COMB HONEY"

**THE A. I. ROOT CO.**

MEDINA, OHIO

ESTABLISHED 1869

